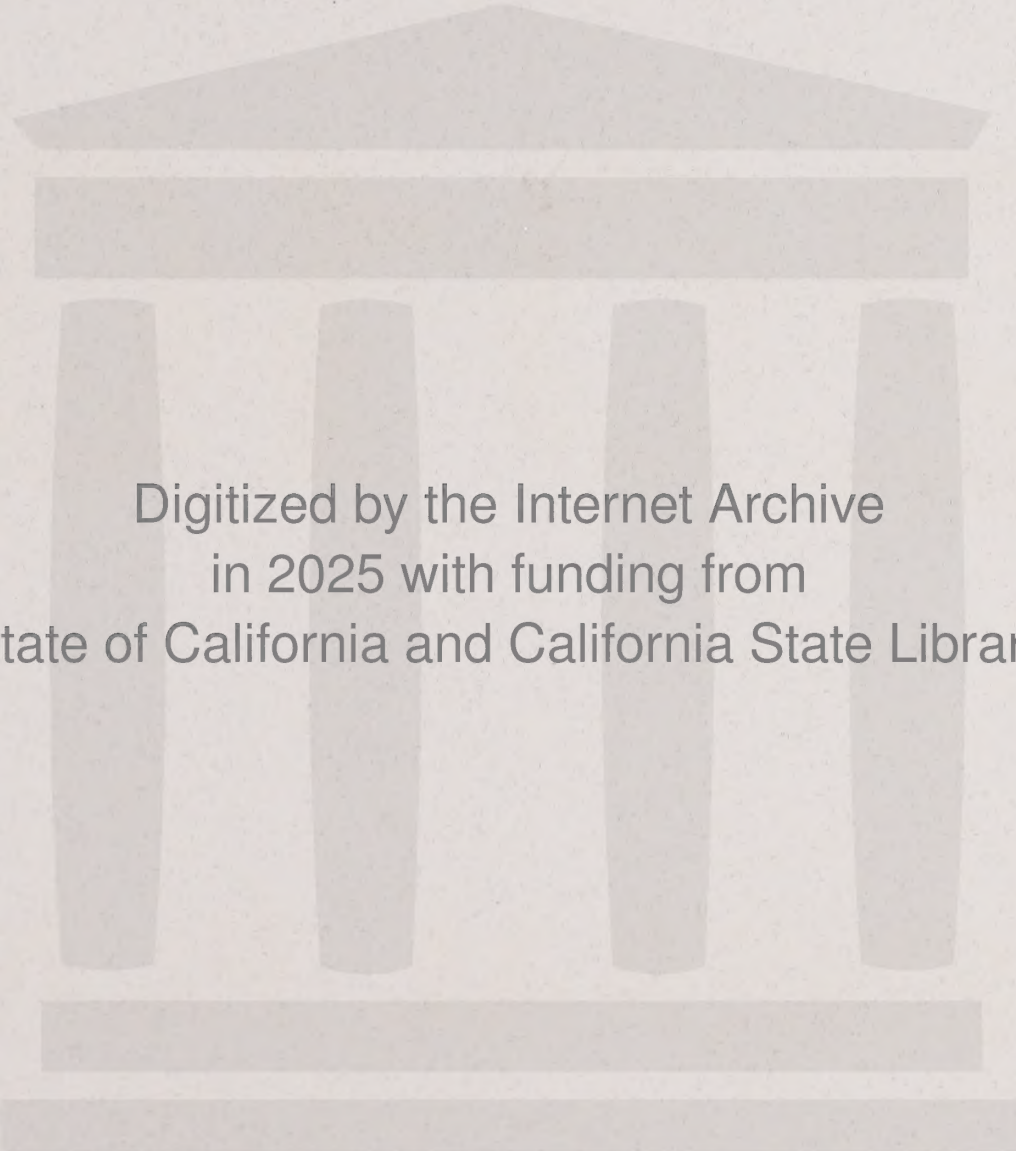


**METROPOLITAN BAKERSFIELD**

**2010**

**GENERAL PLAN**





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# **METROPOLITAN BAKERSFIELD 2010 GENERAL PLAN**

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UNIVERSITY OF CALIFORNIA

**PREPARED FOR:  
CITY OF BAKERSFIELD  
COUNTY OF KERN  
KERN COUNCIL OF GOVERNMENTS  
GOLDEN EMPIRE TRANSIT**

THIS REPORT WAS PREPARED IN PART THROUGH GRANTS FROM THE  
U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSIT  
ADMINISTRATION AND FEDERAL HIGHWAYS ADMINISTRATION IN  
COOPERATION WITH THE STATE OF CALIFORNIA,  
DEPARTMENT OF TRANSPORTATION.





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CITY OF BAKERSFIELD

Clarence E. Medders  
CLARENCE E. MEDDERS, MAYOR

CITY COUNCILMEMBERS

Ken Peterson  
KEN PETERSON, VICE MAYOR  
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LYNN EDWARDS  
First Ward

CONNI BRUNNI  
Fourth Ward

PATRICIA DEMOND  
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KEVIN MCDERMOTT  
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Third Ward

MARK C. SALVAGGIO  
Seventh Ward

CITY MANAGER

J. Dale Hawley  
J. DALE HAWLEY

ADOPTED: March 7, 1990

RESOLUTION NUMBER: 19-90

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BARBARA PATRICK, Vice Chairperson

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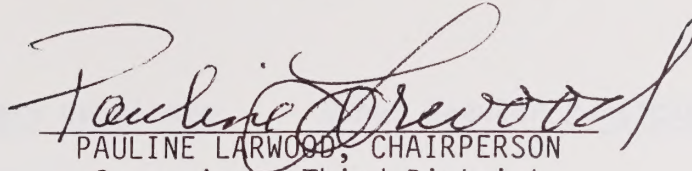
ADOPTED: October 24, 1989

RESOLUTION NUMBER: 41-89





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Supervisor, Third District

ROY ASHBURN  
Supervisor, First District

KARL F. HETTINGER  
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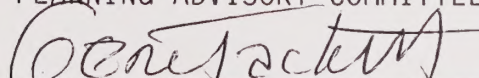
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Supervisor, Second District

MARY K. SHELL  
Supervisor, Fifth District

ADOPTED: March 12, 1990

RESOLUTION NUMBER: 90-175

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ADOPTED: October 24, 1989





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# METROPOLITAN BAKERSFIELD 2010 RECORDS OF CHANGES TO THIS GENERAL PLAN

NUMBER	JURISDICTION	RESOLUTION NO.	DECISION DATE/FILE	NOTES
1	CITY	23-90	3-7-90 GPA 4-89, SEG V	POLO GROUNDS
2	COUNTY	90-175	3-12-90	
3	COUNTY	90-234	4-2-90	29/26 SEC. 35
4	CITY	80-90	6-27-90 GPA 1-90, SEG III	RIVERLAKES RANCH
5	CITY	106-90	8-8-90 GPA 2-90, SEG I	30/27 SEC. 22
6	CITY	107-90	8-8-90 GPA 2-90, SEG II	29/28 SEC. 34
7	CITY	108-90	8-8-90 GPA 2-90, SEG III	29/28 SEC. 22
8	CITY	109-90	8-8-90 GPA 2-90, SEG IV	30/27 SEC. 6 & 7
9	COUNTY	90-808	9-17-90	CASA LOMA -- KERN RIVER 29/26 SEC. 26 & 34
10	COUNTY	90-878	10-8-90	31/29 SEC. 7
11	CITY	146-90	11-7-90 GPA 3-90, SEG I	30/27 SEC. 22
12	COUNTY	90-1033	12-3-90	29/27 SEC. 19 31/28 SEC. 19
13	CITY	25-91	2-27-91 GPA 4-90, SEG II	29/26 SEC. 25
14	CITY	26-91	2-27-91 GPA 4-90, SEG III	29/27 SEC. 18
15	CITY	27-91	2-27-91 GPA 4-90, SEG IV	29/26 SEC. 34
16	CITY	28-91	2-27-91 GPA 4-90, SEG V	29/27 SEC. 36
17	CITY	74-91	5-22-91 GPA 1-91, SEG III	29/27 SEC. 18
18	CITY	75-91	5-22-91 GPA 1-91, SEG IV	29/27 SEC. 32
19	CITY/COUNTY	77-91	5-22-91 GPA 1-91, SEG V	CIRCULATION ELEMENT TEXT
20	CITY	161-91	8-14-91 GPA 2-91, SEG I	29/28 SEC. 22
21	CITY	162-91	8-14-91 GPA 2-91, SEG III	29/26 SEC. 13
22	CITY	163-91	8-14-91 GPA 2-91, SEG V	29/27 SEC. 19
23	CITY	164-91	8-14-91 GPA 2-91, SEG VI	29/27 SEC. 17 & 20
24	CITY	165-91	8-14-91 GPA 2-91, SEG VII	30/27 SEC. 6
25	CITY	166-91	8-14-91 GPA 2-91, SEG VIII	29/27 SEC. 30





# METROPOLITAN BAKERSFIELD 2010 RECORDS OF CHANGES TO THIS GENERAL PLAN

NUMBER	JURISDICTION	RESOLUTION NO.	DECISION DATE/FILE	NOTES
26	CITY	168-91	8-14-91 GPA 2-91, SEG IX	30/27 SEC. 36
27	CITY	217-91	11-6-91 GPA 3-91, SEG I	30/27 SEC. 35
28	CITY	219-91	11-6-91 GPA 3-91, SEG V	30/27 SEC. 21
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# CHAPTER I – INTRODUCTION

## ROLE AND PURPOSE OF THE GENERAL PLAN

The general plan is a policy document designed to give long-range guidance to those making decisions affecting the future character of the Metropolitan Bakersfield planning area. It represents the official statement of the community's physical development as well as its economic, social and environmental goals. The general plan also acts to clarify and articulate the relationship and intentions of local government to the rights and expectations of the general public, property owners and prospective investors. Through the plan, the local jurisdiction can inform these groups of its goals, policies and development standards; thereby communicating what must be done to meet the objectives of the (general) plan.

## ORGANIZATION AND CONTENT OF THE GENERAL PLAN

Section 65300 of California Planning and Zoning Law requires each county and city jurisdiction to adopt a comprehensive, long term general plan for its development. It must contain seven principal elements including Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. The Metropolitan Bakersfield 2010 General Plan contains each of these elements, and in addition has incorporated two optional elements to reflect the specific needs and objectives of the planning area: Public Services and Facilities, and Parks. Chapter "reservations" for the Housing Element, Downtown Redevelopment Element, Kern River Plan Element and Historical Resources Element are also included.

With the exception of the Historical Resources Element, elements receiving chapter reservations have been adopted previously and are not being updated as part of 2010 General Plan adoption. The Historical Resources Element is scheduled for adoption in 1990 and will receive separate review. The Housing Element, by legislative mandate, must be updated in 1991.

## THE UPDATE PROCESS

As localities and their resources are everchanging, it is periodically necessary to update and revise the general plan. State law permits as many as four general plan amendments per element in one year. The state recommends that the entire plan be thoroughly reviewed at least every five years and revised to reflect new conditions, local attitudes and political realities. In addition, the short-term portions of the general plan should be reviewed annually and revised as necessary to reflect new implementation tools, changes in funding sources, and the results of monitoring the effectiveness of past decisions.

## PLANNING AREA

In accordance with the state planning law, a general plan must cover all territory within the boundaries of the adopting city or county. The plan should also take into account any area outside which, in the planning agency's judgment, "bears relation to its planning" (Government Code Section 65300). It also allows adoption of area plans or general plans in part. Thereby, the city and county are able to designate the area covered by this plan for study and adoption. The area covered by this plan coincides with the Bakersfield Metropolitan Priority Area of the Kern County General Plan.

Planning issues, by their very nature, usually are not confined by jurisdictional boundaries. Extraterritorial planning is a means by which a local government can formally indicate to its neighbor its concern for the future of lands under its neighbor's jurisdiction and work to achieve compatible development standards for these lands. Cooperative extraterritorial planning allows cities and counties to guide the orderly and efficient extension of services and utilities; ensure the preservation of open space, agricultural and resource conservation lands; and establish consistent standards for development. State planning law defers to the cities and counties to work together in developing formal agreements for processing development proposals within the common planning areas.

The planning area selected for use in the preparation of the Bakersfield general plan, delineated in Figure I-1 encompasses an area of 408 square miles. This is the boundary for which all goals, policies, and programs in this general plan pertain.

Also defined in Figure I-1 is a shaded area which depicts existing "urban" Bakersfield, defined as areas in which a minimum of 50 percent of all parcels within one-half mile radius are developed for residential uses in excess of three units per net acre, and/or commercial uses with a floor area ratio of 0.2.

The city's sphere of influence boundary (1989), defined as the probable ultimate physical boundary and service area of the city, is also depicted in this figure. Portions of the planning area fall outside the sphere of influence boundary, and are included in the general plan based on the relationship this area bears on the planning and land use concerns of the City of Bakersfield. The 2010 planning area boundary was mutually agreed upon by the city and county, and is consistent with Kern County's Year 2000 Plan.

## INTERGOVERNMENTAL COORDINATION

State law requires local governments to work together and with other agencies and public utility companies in preparing and implementing their general plans (Government Code Sections 65304 and 65400(a)). In the case of the Metropolitan Bakersfield 2010 General Plan, where both the city and the county are responsible for implementation, cooperation is paramount. In its General Plan Guidelines, the State Office of Planning Research states:



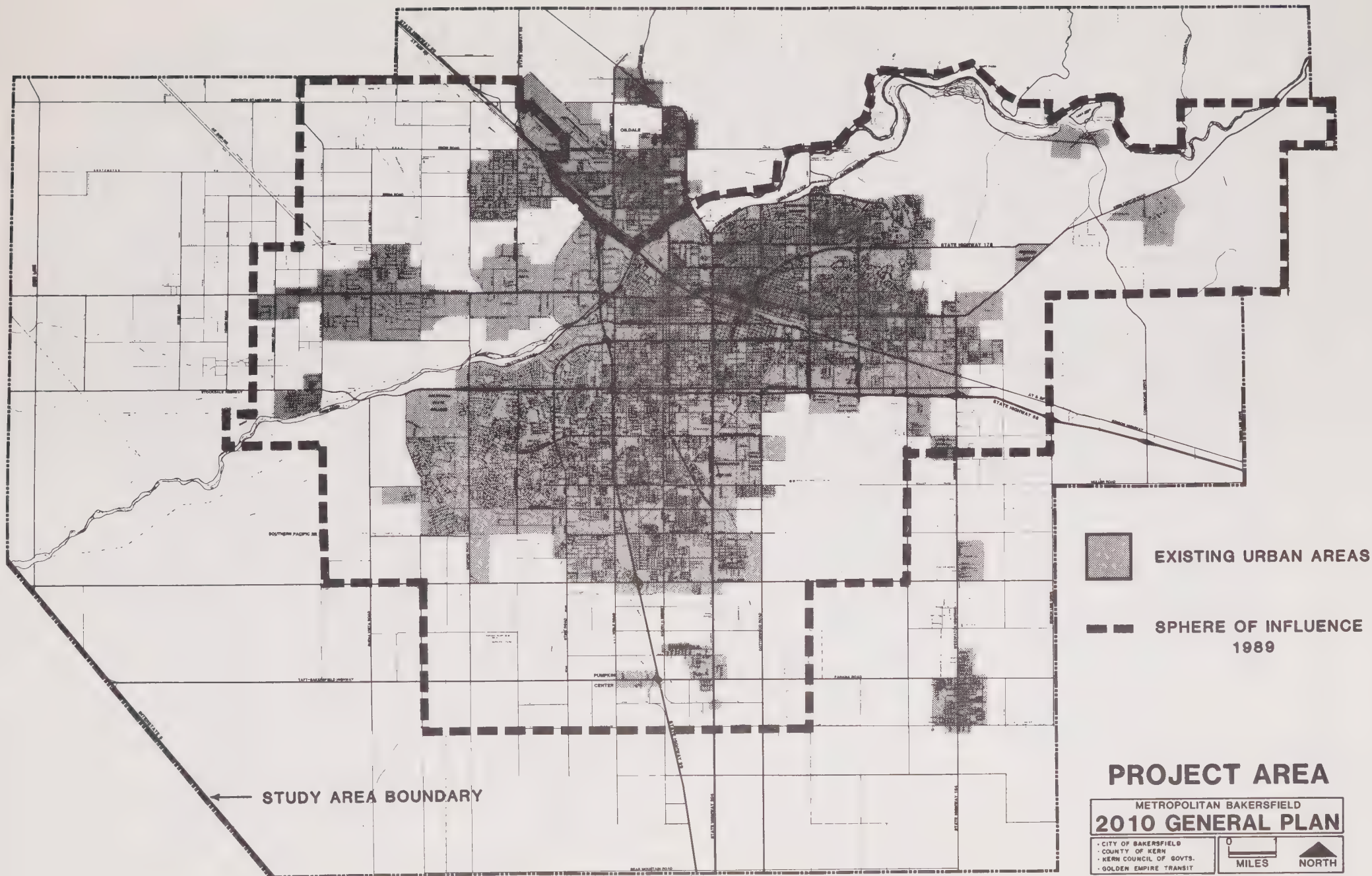


FIGURE I-1





In the planning process, legitimate conflicts crop up between agencies with different responsibilities, constituencies, and viewpoints. To reduce these conflicts, cities and counties should vigorously pursue a full understanding of the other agencies' positions and be prepared to negotiate on the issues at conflict.

Intergovernmental coordination must occur between various levels of government, including federal, state, regional, county, and city. The following presents a general summary of the relationship between these various levels of government.

### FEDERAL AGENCIES

The federal government can be seen as having three primary roles with respect to the planning area. The first role is regulatory and includes among other things, standards for health and the environment, which are administered by such federal agencies as the Environmental Protection Agency, Fish and Wildlife Service and OSHA. The second role is managerial. It entails the management of federally owned land which generally, the city and county have no jurisdiction over. Typically, such lands are managed by the Department of the Interior, Department of Agriculture, and Department of Defense. Finally, the federal government functions as a clearinghouse of information and source of funding for state and local agencies.

### STATE AGENCIES

State and federal laws require many state agencies to prepare long-range plans and policies to guide public and private development. Local jurisdictions, in developing and administering general plans, deal most commonly with the State Department of Housing and Community Development, Department of Transportation, Department of Parks and Recreation, Department of Water Resources, Office of Planning and Research, and Office of Emergency Services.

The state exercises direct regulatory authority in a number of areas through the permit procedures of such agencies as the Public Utilities Commission, Office of Noise Control, Department of Health Services, State Air Resources Board, State Water Resources Control Board, and Board of Reclamation. The general plan should complement and be consistent with state regulations in this regard.

State agencies also acquire, develop, and manage land and facilities which have a major effect on local development. Some of the more influential agencies include the Department of Transportation, Department of Water Resources, Department of Parks and Recreation, State Lands Commission, Department of Developmental Services, Department of General Services, and the California State University and College.

## REGIONAL AND AREA-WIDE AGENCIES

Three types of regional and area-wide agencies carry out planning and regulatory activities in the planning area:

- a. A voluntary council of governments, Kern Council of Governments (Kern COG), made up of cities and counties and created under the Joint Exercise of Powers Act, carry out a range of planning programs affecting land use, housing, transportation, air and water quality. In Bakersfield, the local COG concerns itself primarily with regional transportation issues, including airport planning, and preparation of the Regional Housing Allocation Plan.
- b. State agencies operating at the regional level, such as the Regional Water Quality Control Board.
- c. Regional single-purpose agencies created or authorized by state legislation, such as the Air Pollution Control Districts (APCDs).

## LOCAL AGENCIES

Local agencies include city and county jurisdictions. Their primary responsibilities include land use regulation, health, safety, welfare, and police protection. City and county governments provide citizens the most direct political representation. They also allow for variations in local regulations through mechanisms such as conditional use permits and zoning variances.

Neighboring city and county jurisdictions must send one another copies of their respective proposed and adopted general plans. In addition, when a city or county proposes a public works project within another city or county's jurisdiction, it must submit the proposed project to the appropriate planning agency for review of its conformity to the adopted general plan.

Special districts created under a variety of state statutes offer a range of services similar to cities and counties. The most important of these districts for planning purposes are school districts and those providing sewer, water, garbage collection, airports, flood control, air pollution control, transit, parking, roads, parks and recreation, resource conservation, and community services. Each special district must annually submit a list of its proposed public works projects to the appropriate city or county planning agency for review of conformance to its general plan. Special districts including school districts to a degree, must also comply with local building and zoning ordinances of the city or county in which they are located. Most districts created by state and federal acts are exempt.

In addition to special districts, privately owned companies under jurisdiction of the California Public Utilities Commission, including gas, electric, water, transit companies and railroads, make services available and carry out public works having a direct bearing on the general plan.

Local Agency Formation Commissions (LAFCOs) are state-created and govern the boundary changes of all local agencies, except school districts. LAFCO's within each county have the power to approve or deny annexations and detachments. In addition, state law requires LAFCO to determine the "sphere of influence" of each local agency and special utility district within a county.

Finally, special purpose agencies, such as redevelopment agencies, housing authorities, and parking authorities, are also involved in community development.

#### EXISTING AND PROPOSED STRUCTURES FOR INTERGOVERNMENTAL COORDINATION

The city and county have formulated a number of agreements and established committees to provide intergovernmental coordination in the planning area. Examples include the following:

- A city-county intergovernmental relations committee, consisting of representatives from the Kern County Board of Supervisors, the Bakersfield City Council and senior staff meets monthly to review issues of mutual interest and concern.
- A process of joint review and referral for development within the Casa Loma and Kern River planning areas.
- County and city public works/engineering staff customarily and routinely cooperate in the planning, design, and implementation of storm drainage, solid waste disposal, water supply, road and bridge construction, and traffic projects which are located in or affect both governmental agencies.

This general plan proposes additional agreements and institutional structures to enhance intergovernmental coordination. Responsibilities vary according to the type of service provided, use requirements, and geographic area served. Generally, they are intended to provide coordinated and consistent services to all residents, businesses, and visitors to the planning area. In some cases, the plan calls for the formation of a single entity to provide service to the entirety of the area, or to contiguous geographic areas which cross city and county boundaries. In other cases, the plan calls for the retention of existing service structures with additional cooperative arrangements for areas which are fragmented by jurisdictional boundaries (e.g., county "islands" surrounded by urban/suburban types of development). In all cases, the plan calls for the provision of like-services to like-development regardless of jurisdictional boundary. For example, urban areas (those areas developed at quarter-acre lots and higher densities) which are contiguous to other urban areas should receive a consistent level of "urban type" services regardless of whether they are located in the city or county. The specific arrangements among multiple service agencies are defined as they pertain to each element of this plan.



### SUMMARY

The purpose of general plans is to provide local jurisdictions with "constitutions" for future development. While responsible for regulating land use, health, safety, welfare, and police authority, they must coordinate regulation with other local jurisdictions and state and federal agencies.

Often there is an overlap of responsibilities between federal, state, regional, and local agencies. It is the intent of this plan to implement all policies and programs in conformance with state and federal laws.

Of particular concern to the 2010 General Plan is the coordination of planning among the city, county, special districts, and special purpose agencies. Many agreements, both formal and informal, already exist between these agencies. However, the preparation for the Metropolitan Bakersfield 2010 General Plan has revealed several areas of deficiency in this coordination. Policies and programs for improved coordination, particularly among local (i.e., city and county) agencies, are defined in the policy and implementation sections of each element.

### RELATIONSHIP WITH OTHER PLANS

State law requires the general plan to be both internally consistent, and consistent with all other community plans. Additional plans within the planning area include:

- Air Quality Maintenance and Non-Attainment Plan-Kern County
- Bikeways Plan (Circulation Element)-City of Bakersfield, Kern County
- Downtown Redevelopment Element-City of Bakersfield
- Emergency Response Plan-City of Bakersfield, Kern County
- Kern River Plan Element-City of Bakersfield, Kern County
- Regional Transportation Plan-Kern COG
- Regional Airport Systems Plan-Kern COG
- Solid Waste Management Plan-Kern County, City of Bakersfield
- Hazardous Waste Management Plan-Kern County, City of Bakersfield
- Habitat Conservation Plan-Kern County, City of Bakersfield

These, along with other community plans in the planning area, are by and large consistent with this general plan, but may need further refinement as a result of this plan's adoption and their own development.

Requirements for solid waste management plans and general plans recommend that solid waste sites be designated on the land use plan map. This helps to ensure that nearby land use will remain compatible with these facilities. The policies, plan proposals and standards within the general plan must also be consistent with the regional Air Quality Maintenance Plan. One way in which this plan achieves this compatibility is by encouraging a land use pattern which reduces reliance on the automobile through the creation of high density residential/commercial centers, policies to limit leapfrog development and encourage the establishment of commercial services and public facilities near residential areas. Finally, the general plan must be consistent with all airport land use plans, and shall be amended as necessary within 180 days of any amendment to an airport land use plan.

## SPECIFIC PLANS

In accordance with state law, both the city and county have adopted specific plans for properties within the boundaries of the 2010 area. It is the intent of the 2010 Plan to incorporate those plans, by reference, and to make provision for the adoption of future specific plans as may be desired or required.

These specific plans must contain measures to implement all policies in the general plan for that area. Specific plans are intended to be an amplification of the goals and policies of the 2010 Plan and are, therefore, consistent therewith. Specific plans in existence as of the date of adoption of this general plan are shown in a generalized form on Figure I-2. To determine exact land use designations within presently existing, or any subsequently adopted, specific plans, it is necessary to refer to those adopted documents.

Localized issues, problems and opportunities will continue to require specific, individualized treatment to ensure that solutions to problems or realizations of opportunities are reflective of the needs of local residents. The use of specific plans will continue as a basic tool for addressing local needs.

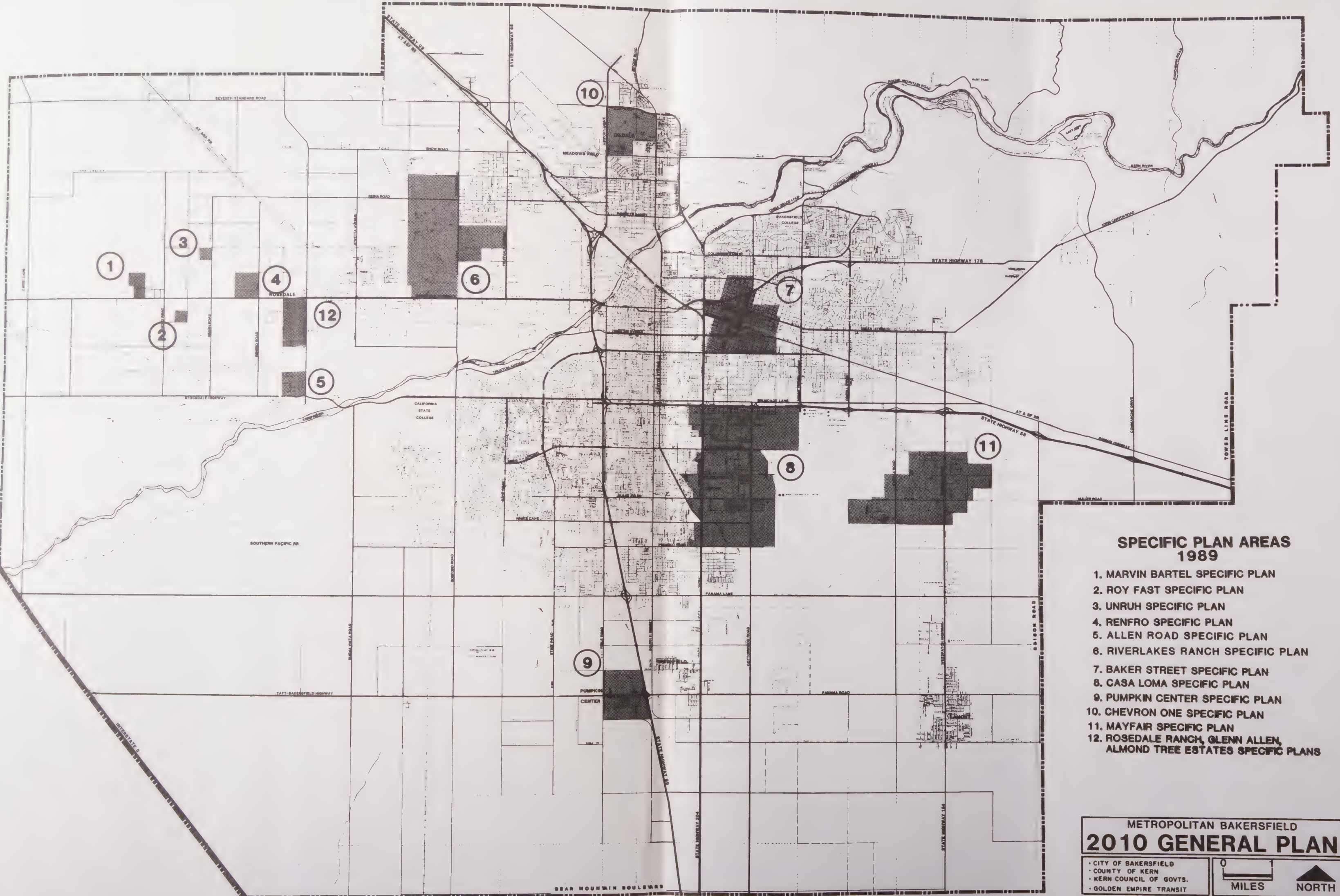
## PLAN PREPARATION PROCESS

The Metropolitan Bakersfield 2010 General Plan is the product of a collaborative effort. A twenty-five member General Plan Advisory Committee (GPAC), composed of community residents and business representatives, was selected to assist in the preparation of the general plan and make advisory recommendations to the city and county. Individuals were selected from a wide range of interest groups in the community representing each of the planning area's eleven neighborhoods. Furthermore, the city established a Technical Advisory Committee (TAC) composed of inter-agency staff for review of all documents prepared for the plan. A team of professional consultants was retained to structure, guide and provide technical input into the planning process.

In addition to the GPAC, community participation was solicited from special interest group subcommittees whose focus was on specific planning elements such as transportation, land use, and housing. Two rounds of community-wide neighborhood workshops were conducted where public input was sought to define principal planning issues, and to review alternative land use plans. A speakers bureau was also assembled where presentations of land use alternatives were made to a variety of community groups. The City Planning Commission and County Planning Advisory Committee conducted joint public workshops and public hearings on the plan and associated environmental documents and provided recommendations to the City Council and Board of Supervisors. The Metropolitan Bakersfield 2010 General Plan process was covered substantially in the local newspaper, radio and television media.





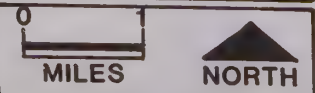


**SPECIFIC PLAN AREAS  
1989**

- 1. MARVIN BARTEL SPECIFIC PLAN
- 2. ROY FAST SPECIFIC PLAN
- 3. UNRUH SPECIFIC PLAN
- 4. RENFRO SPECIFIC PLAN
- 5. ALLEN ROAD SPECIFIC PLAN
- 6. RIVERLAKES RANCH SPECIFIC PLAN
- 7. BAKER STREET SPECIFIC PLAN
- 8. CASA LOMA SPECIFIC PLAN
- 9. PUMPKIN CENTER SPECIFIC PLAN
- 10. CHEVRON ONE SPECIFIC PLAN
- 11. MAYFAIR SPECIFIC PLAN
- 12. ROSEDALE RANCH, GLENN ALLEN,  
ALMOND TREE ESTATES SPECIFIC PLANS

**METROPOLITAN BAKERSFIELD  
2010 GENERAL PLAN**

• CITY OF BAKERSFIELD  
• COUNTY OF KERN  
• KERN COUNCIL OF GOVTS.  
• GOLDEN EMPIRE TRANSIT







As required by the California Environmental Quality Act (CEQA), an Environmental Impact Report (EIR) was prepared with the plan. This document discusses the change in the planning area's physical and environmental character which could occur under implementation of the plan. More specifically, the EIR analyzes the impact of land use buildout for each of the plan's subject sections, and identifies mitigation measures to minimize these impacts.







# CHAPTER II – LAND USE ELEMENT

## STATUTORY REQUIREMENTS

State of California Planning and Zoning Law requires that a land use element be prepared as part of the general plan as follows:

Government Code Section 65302(a): A land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall also identify areas covered by the plan which are subject to flooding and shall be reviewed annually with respect to such areas.

Effectively, the Land Use Element has the broadest scope of any element required by the state. Since it regulates how land is to be utilized, it integrates most of the issues and policies contained in other plan elements.

## OVERVIEW OF EXISTING CONDITIONS

### EXISTING LAND USE

An inventory of existing land use has been prepared based on review of aerial photographs and Kern County land use maps, and supplemented with field checks of selected sites. Existing land uses in the planning area have been classified according to the following categories.

- ° Residential
  - Estate/Suburban: densities to a maximum of 1.0 dwelling unit/net acre. This type of residential is characterized by single-family units located on large lots, often contiguous to agricultural acreages, and is most commonly found on the periphery of the planning area.
  - Low Density: densities in this category range from 1.0 to 7.26 dwelling units/net acre, and are characterized by single-family detached housing, typical of tract developments.
  - Medium to High Density: densities in this category range from 7.26 dwelling units/net acre and upwards, and are typically multi-family duplex or apartment housing.



- Retail Commercial/Office: includes retail stores, restaurants, hotels, professional offices and services.
- Industrial: includes manufacturing or assembly, storage, and petroleum refining.
- Mineral and Petroleum: consists predominately of oil fields and petroleum related operations.
- Agriculture/Open Space: includes agriculture, related light agricultural industries, floodplain areas, and vacant lands.
- Institutional: refers to all public facilities, including schools, government offices, public utilities, and hospitals.
- Public Recreation: includes publicly owned recreational facilities, e.g., parks, golf courses, campgrounds, etc.
- Commercial Recreation: includes privately owned recreation uses, such as country clubs, private golf courses, etc.

The existing uses (1986) are depicted on a 1"=1,000' scale map which is on file at the City of Bakersfield City Hall and are tabulated in Table II-1.

Agriculture/open space, mineral and petroleum, and public recreation are the predominant land uses comprising 82 percent of the total planning area. The remaining 18 percent (46,862 acres) of the planning area's 261,120 acres are developed with residential, commercial, and industrial uses characterized by urban densities and intensities\*.

Residential land uses comprise 62 percent of the total developed land use in the planning area. Low density (single-family) residential represents 71 percent of the total residential acreage. Suburban/estate residential represents 17 percent of the total residential acreage, occurring predominately in the rural unincorporated portions of the planning area and in the incorporated northeast, around Rio Bravo. Medium to high density residential uses comprise 12 percent of the total residential acreage. The overall residential land use pattern is suburban in nature, with uniform single-family densities extending outward from the urban core.

Commercial/office uses comprise 14 percent of the total developed area. Commercial development is typically located along major transportation corridors as linear strip type development, with neighborhood serving commercial uses scattered throughout the planning area and Industrial land uses comprise 12 percent of the developed urban area. Most of these are heavy service uses which consume large amounts of land and are often visually

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\* Agriculture/open space, mineral and petroleum, and public recreation were not considered as "developed" due to the low intensity nature of these land uses.

TABLE II-1

## Existing Land Uses\*

<u>Land Use</u>	<u>Area (Acres)**</u>	<u>% of Developed Area</u>
Suburban/Estate Residential (0-1 du/ac)	5,179	11%
Low Density Residential (1-5 du/ac)	20,626	44%
Medium-High Density Residential (6-45 du/ac)	3,375	7%
Commercial/Office	6,515	14%
Industrial	5,508	12%
Institutional	4,529	10%
Commercial Recreation	<u>1,130</u>	<u>2%</u>
Subtotal	46,862 (73 square miles)	100%
Agriculture/Open Space	197,453	
Mineral and Petroleum	15,861	
Public Recreation	<u>944</u>	
TOTAL Project Area	261,120 (408 square miles)	

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\* Existing land uses were determined by review of Kern County land use maps, field surveys, and review of aerial photographs.

\*\* Acreage calculations were determined by electronic planimeter.

Source: Envicom Corporation, 1986.

unattractive. Drilling facilities, tanks, pipes, and other oil-related equipment are scattered across the landscape. The majority of industrial use occurs along rail lines and major vehicular transportation corridors. Land use incompatibilities exist in many areas due to the intermixing of industrial uses with commercial and residential uses without adequate buffering.

Institutional uses comprise 10 percent of the total developed land use in the study area. While major concentrations of public buildings are downtown, institutional uses are relatively decentralized with a state university in the southwest, a community college in the northeast, and schools and churches dispersed throughout the planning area.

Commercial recreation comprises two percent of the developed area, represented by four private and two public golf courses, and several private tennis clubs.

#### GENERALIZED LAND USE PATTERNS

For purposes of analysis, the planning area has been divided into four quadrants with State Highway 99 serving as the north-south axis and Stockdale Highway/Brundage Lane, Highway 58 serving as the east-west axis. These four quadrants are further subdivided into developed urban and rural-undeveloped areas, as depicted in Figure II-1. These areas include:

##### URBAN AREAS:\*

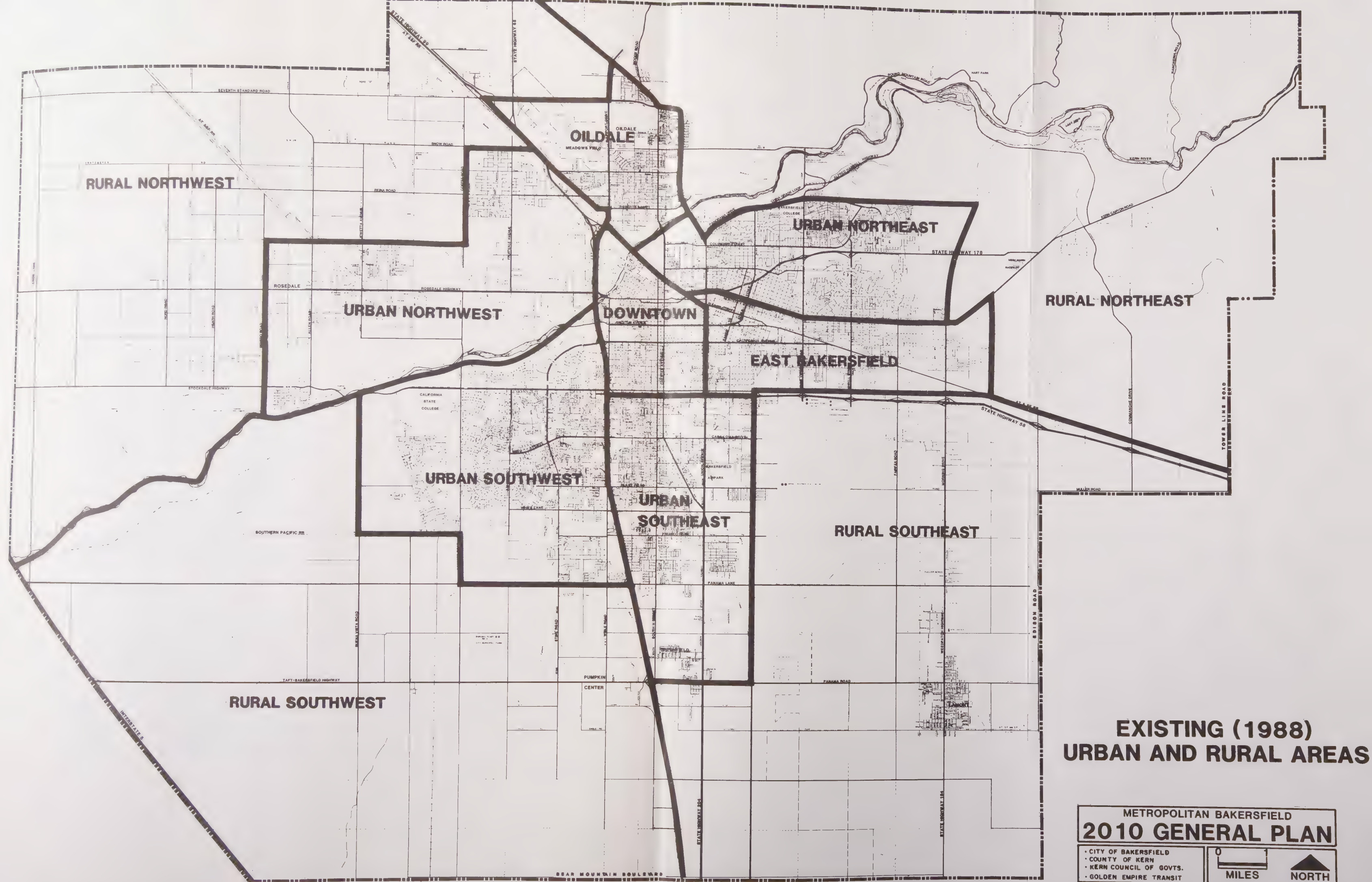
##### 1. Downtown

Downtown is bordered by State Highway 99 on the west, Sumner Street/Golden State Highway/Edison Highway on the north, Union Avenue on the east, and Brundage Lane on the south. The downtown contains the city and county government offices, two large hospitals, several medical office buildings, numerous retail shops, and several historic single-family neighborhoods. Downtown was originally the center of the city, and comprised the largest concentration of business and retail in the city. Competing shopping malls and commercial districts have resulted in growth being focused away from downtown. All the major department stores have moved out of downtown. The city has adopted a Redevelopment Element to help revitalize the downtown area.

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\* These urban areas provide a generalized boundary of "existing urban areas" depicted in Figure I-1.









## 2. East Bakersfield

East Bakersfield is generally bordered by Union Avenue on the west, Niles Street on the north, Vineland Road on the east, and Brundage Lane on the south. East Bakersfield includes the Baker Street commercial corridor, several pockets of light industry, and mostly single-family neighborhoods with some scattered multi-family residences. The intermixing of commercial and industrial uses adjacent to residential properties without adequate visual and/or noise buffers has produced land use incompatibilities in East Bakersfield.

## 3. Oildale

Oildale is situated north of the Kern River between State Highway 99 and Manor Street. Oildale represents a blend of oil-related industry and small-lot single-family residential neighborhoods. Local serving and highway commercial land uses are located along the major arterials. Meadows Field, the county airport, is a major land use feature in Oildale.

## 4. Urban Southwest

The urban southwest is generally bordered on the north by the Kern River, on the south by Pacheco Road and Panama Lane, on the east by State Highway 99, and on the west by Buena Vista Road. The majority of this area has been master planned and developed with suburban type single-family residences and neighborhood commercial areas. There are two major commercial nodes in the Southwest: an office/commercial node along California Avenue, and a retail node along Ming Avenue. Industrial uses are concentrated around the McKittrick Branch of the Southern Pacific Railroad tracks. California State University, Bakersfield is in the southwest. Substantial commercial and office potential also exists south and west of the university.

## 5. Urban Southeast

The urban southeast is generally bounded by Freeway 58 on the north, Panama Road on the south, State Highway 99 on the west, and Cottonwood Road on the east. The pattern of land use in this area is characterized by linear commercial development, particularly along Ming and Union Avenues, lacking any distinguished focus. This area includes: the Valley Plaza Mall (regional shopping center); the Bakersfield Airpark; and, Casa Loma, a community with older residential uses which has been designated by the state as an "Enterprise Zone," the purpose of which is to create jobs, stimulate new industrial and commercial development, and encourage private investment.

## 6. Urban Northwest

The urban northwest is generally bounded by Snow and Hageman Roads on the north, Renfro Road on the west, the Kern River on the south, and State Highway 99 on the east. This area includes: Rosedale, which consists of large-lot rural residences, local serving commercial, and scattered oil refineries; Green Acres, which also has many large-lot residences; and the Fruitvale Oil Field.

## 7. Urban Northeast

The urban northeast is generally bordered on the north by Panorama Drive, on the east by Morning Drive, and south by Sumner/Niles Streets. This area includes older single-family neighborhoods, some local commercial, Bakersfield College, and the Bakersfield Country Club. The East Hills Mall (regional shopping center) also exists in this area.

## RURAL AREAS:

### 1. Rural Southeast

This includes: (1) Lamont, a rural service community with small-lot residences, a core of retail shops, and various agricultural support industries; (2) a large sewage treatment site extending from Brundage Lane to Panama Road; and, (3) extensive agricultural lands.

### 2. Rural Southwest

This is primarily agricultural. It includes Pumpkin Center, an area adjacent to State Highway 99 that provides travelers support commercial services. The rural southwest also includes extensive agricultural lands and a large area to the west of Buena Vista Road that is targeted by the state for a groundwater recharge project.

### 3. Rural Northwest

This area is predominantly agricultural with scattered rural residential land uses.

### 4. Rural Northeast

This area, characterized by foothill topography and large-lot housing, features the Rio Bravo Resort, Lake Ming, and Mesa Marin Raceway.

## LAND USE ISSUES

### ° Mix of Land Uses in Bakersfield

- Anticipated growth will require an adequate and diverse mix of uses to meet a variety of economic and social needs.

° Organization of Land Uses

- Recent growth in the planning area has been predominant in the southwest, with other areas growing in a less organized manner. As a result, the image of a city with a "strong" downtown has declined.
- The planning area is characterized by a dispersed pattern of uses. There are a number of neighborhoods and commercial areas uniquely characterized by their activity and character.
- There is a lack of adequate commercial services in some areas.
- Existing land use patterns, lacking public transit services, encourage Bakersfield residents to commute to work, shopping, etcetera. This reliance on the automobile results in increased traffic congestion and worsened air quality, in addition to longer travel times compared with areas where uses are more concentrated and oriented towards the pedestrian.
- The existing pattern of development has occurred without taking advantage of the planning area's natural physical setting. Few existing uses focuses on the open space amenity of the river. Infrastructure constraints have shifted development to the less constrained flatlands.

° Existing Land Uses

- The city's existing uses vary in their character and quality. Newer residential and commercial areas are, due to their age, of good quality and well maintained. Older areas vary substantially. Some are in good condition, while a number of residential, commercial, and industrial areas are physically deteriorated and in need of repair.
- Many existing oil production areas are characterized by drilling facilities, tanks, pipes, and other equipment scattered across large acreages, visually conflicting with newer development.
- In accordance with the city's and county's existing general plans, a number of established single-family neighborhoods are being recycled and infilled with higher density, multi-family units, impacting the low density character of these neighborhoods. Oildale, Downtown, Urban Northeast, Urban Southeast, and East Bakersfield are examples.
- The downtown area lost its focus as the commercial center of the community a number of years ago due to new commercial developments elsewhere. Its new multi-purpose role, as defined by the Downtown Redevelopment Element has yet to be realized.

## ° Sprawl

- The extensive outward expansion of low density residential development and intermittent, sprawling land use patterns in the planning area result in increased energy costs, travel time, and infrastructure costs, and the conversion of prime agricultural soils. This has been compounded by development and specific plans which could magnify the "stretch" of development.

## ° Land Use Compatibility

- The intermixing of land uses in many areas has sometimes resulted in land use incompatibilities, such as those related to physical scale, noise, traffic and parking. Specific types of incompatible land uses include the following:
  - obtrusive industrial uses adjacent to residential
  - heavy industrial uses adjacent to commercial
  - commercial uses abutting residential without adequate buffers
  - high density residential adjacent to lower residential densities without adequate buffers
  - noise-sensitive uses adjacent to highways, railroads, and airports
- Many neighborhoods and commercial districts contain buildings of significantly varying design styles and uses of materials (e.g., metal and glass curtain wall office buildings adjacent to buildings of historic design style).

## ° Relationship of Land Use to Infrastructure and Services

- As development has occurred, necessary improvements have been made to public infrastructure to support individual projects; continued land use development will contribute significant demands for new infrastructure and improvements for existing aging systems.
- Fragmented and over-extended patterns of development result in the construction of extensive infrastructure which is costly both to development and present users.
- Several developed areas lack adequate services such as sewage collection and treatment, water systems, storm drainage, fire hydrants, street lights, traffic control, road widths and parks.



- ° Image/Visual Character

- Several neighborhoods in the planning area demonstrate distinctive architectural and aesthetic continuity. Many others lack such character.
- Major circulation routes to the metropolitan area are characterized by poor visual quality and weakly defined entry points.

#### OVERVIEW OF THE 2010 GENERAL PLAN BASIC PRINCIPLES FOR NEW URBAN AREAS

The Metropolitan Bakersfield 2010 General Plan Land Use Map is depicted in Figure II-2, located in the back of this document. The plan map provides a graphic depiction of the general plan's development policies, and indicates the land use designations for which pertinent policies and standards have been established. Two basic principles govern the plan: the focusing of new development into distinctive centers which are separated by low land use densities and the siting of development to take advantage of the environmental setting. These principals are defined as the "centers" and "resource" concepts respectively. Figure II-3 conceptually illustrates these land use principles.

The "centers" concept provides for a land use pattern consisting of several concentrated mixed-use commercial and high density residential centers surrounded by medium density residential uses. Single-family residential uses are located between these mixed-use commercial/residential centers primarily. This concept encourages people to live and work in the same area and, thus, serves to minimize sprawl and reduce traffic, travel time, infrastructure costs, and air pollution. In addition to promoting the formation of several large concentrated mixed-use centers, the plan also attempts to consolidate smaller, neighborhood-serving commercial development by prescribing minimum distances between commercial parcels and by discouraging strip commercial development.

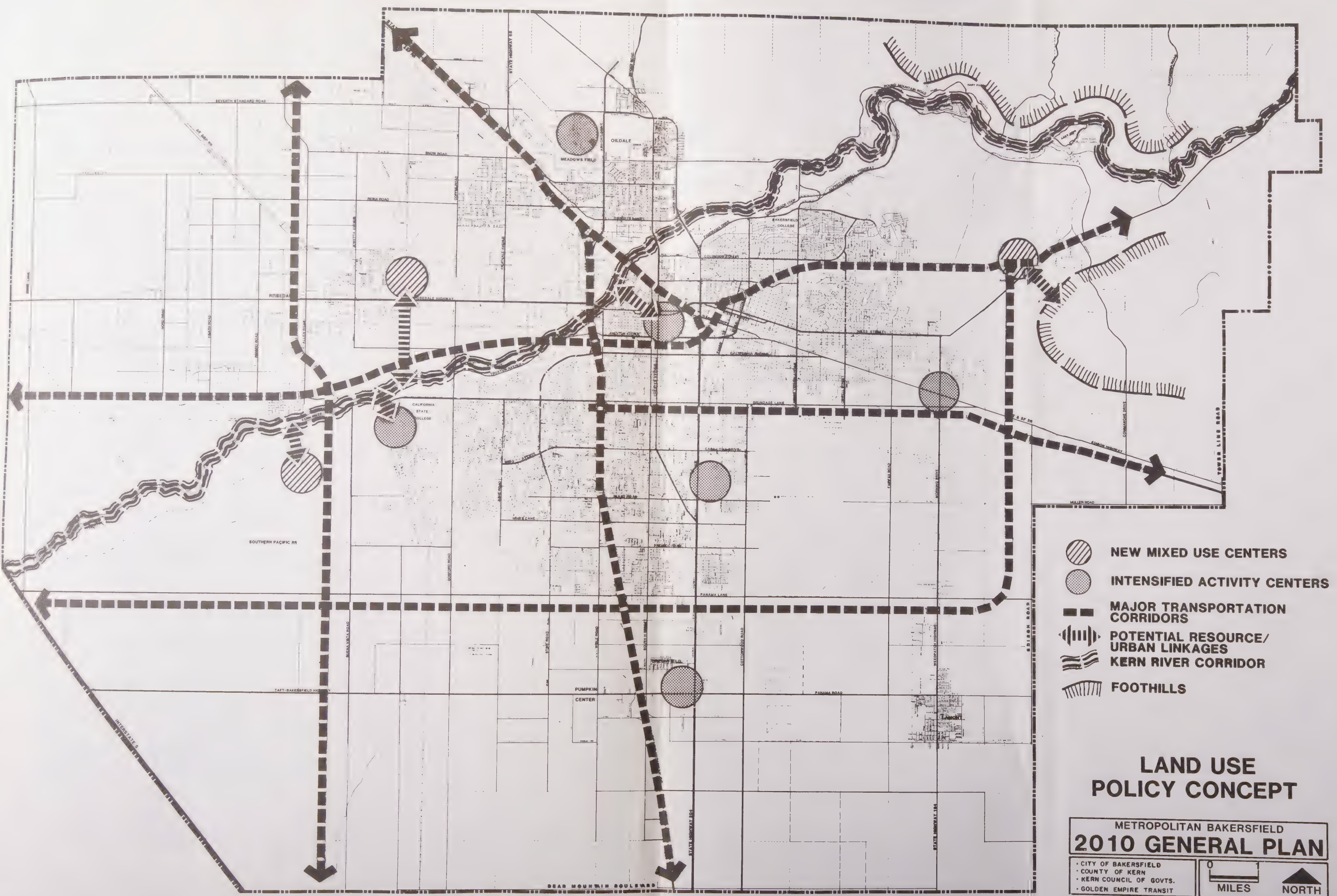
The "resources" concept emphasizes the siting of development to reflect the planning area's natural and visual resources; its river, canals, and foothills. The "resources" concept uses as a point of departure, the 1984 Kern River Plan Element (as amended), which takes advantage of the recreational potential of the river while respecting the river's sensitive natural habitats and aesthetic resources. It is proposed that linkages to unique resources be encouraged. Policies have been included in the plan to promote utilization and sensitivity of natural and visual resources.

#### BASIC PRINCIPLES FOR EXISTING URBAN AREAS

The plan provides for (a) preservation and conservation of existing residential neighborhoods whose identity is characterized by the quality and maintenance of existing construction, stability, and reputation as a "special" place in the community, (b) infill of vacant parcels at prevailing densities, (c) recycling and intensification of areas which are physically or economically depressed, and (d) open space linkages where feasible to the Kern River and foothill areas.











Strip commercial and sprawling residential land use patterns, which lack consolidation or focus are inconsistent with principles defined in the plan.

In addition, this plan provides for the preservation of stable, primarily single-family\* neighborhoods by allowing for a reduction in the densities from those permitted by the previous general plan.

It is important to note that the general plan maps can only reflect the quality and character desired in a particular land use designation in general terms. The maps do not illustrate every existing exception from one land use category depicted, even though such uses may be recognized as acceptable and "permanent" uses. Thus, the maps indicate the predominant use of land in each area and do not preclude existing or future minor deviations from the overall pattern as may be permitted by the Zoning Ordinance, Variance, and Modification procedures.

#### BASIC PRINCIPLES FOR DEVELOPMENT OF PERIPHERAL AREAS

New development on the periphery of urban Bakersfield will be focused in three (3) new mixed use activity centers located in the southwest, northwest and northeast. It is expected that the southwest center would include a mix of professional office and retail uses, moderate density residential, and would filter outwards to lower suburban-type densities. Although depicted in Figure II-3 in policy concept form, actual land use designations for the southwest center and the area around it will be determined through a more detailed land use and environmental analysis. In depth analysis of the southwest center is warranted due to its growth potential and its related impacts, impact on prime agricultural lands, and potential to impact the Kern River corridor resource. The northwest center will contain retail commercial, light industrial, moderate and high density residential, and will be surrounded by low and estate residential densities. The center in the northeast will include retail commercial, professional office, moderate and high density residential, and will filter outwards to lower densities. The plan encourages that each center: (a) focus on a major open space amenity, such as a park or water body; (b) link land uses to the Kern River where possible; and (c) exhibit pedestrian sensitivity with appropriate design applied to encourage pedestrian activity. In addition to these three activity centers, peripheral development will be focused in smaller community centers, such as in the Greenfield and Lamont areas, with local-serving commercial services and residential uses.

As a general rule, the sphere of influence boundaries were utilized to help define the boundaries of planned urban growth. However, there are two exceptions to this. The most obvious exception is the southwest center. Here, while the commercial center lies within the sphere of influence, the single-family residential densities extend beyond the western boundary of the present sphere of influence. Justification for extending beyond the sphere of influence boundary includes the following:

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\* "Primarily single-family" refers to those neighborhoods in which 75 percent or more of the units are of "LR" density (7.26 du/net acre) or less and are in a state of good repair.



(a) rapid growth has already taken place in this direction in recent years and shows no signs of slowing; (b) the area presents an opportunity to capitalize on the Kern River as a visual and aesthetic resource; and (c) the ease with which services may be extended. The second exception occurs in Oildale. In particular, a major new airport terminal with supporting commercial and industrial uses are master planned just north of the existing terminal at Meadows Field.

#### LAND USE PLAN ASSUMPTIONS

Population projections\* prepared by Economics Research Associates indicate that between 1987 and 2010 the planning area population will grow from 285,950 to 567,500, resulting in a demand for 112,620 new dwelling units\*\*. This new population will support an additional 20,812,800 square feet of commercial floor area and 18,654,500 square feet of industrial building floor area. Of the total residential land uses in the year 2010, it is estimated that 10 percent of all dwelling units will be estate residences, 65 percent single-family, and 25 percent multi-family. Expressed in terms of acreage, the split between single- and multi-family residential area will be 90 percent and 10 percent, respectively.

In order to provide the holding capacity which may be required for dynamic growth in the planning area, this plan accommodates a land use capacity which exceeds the projected market demand through the year 2010. Table II-2 compares the current acreages of residential, commercial, and industrial land uses with the expected 2010 market demand general plan buildout, and buildout under the current city and county general plans. The plan accommodates a net increase of 153,856 dwelling units.

This represents an approximate 133 percent increase above the existing number of residential units. Commercial floor area could increase by 46,033,771 square feet, or approximately 300 percent above existing. Approximately five percent of the newly developing areas are for commercial uses. Approximately 49,997,500 square feet of new industrial development is accommodated under the plan, representing a 550 percent increase over existing industrial use. As this table indicates, the planning area has substantial development potential under the buildout of the Land Use Plan. Table II-3 indicates the acreage and buildout potential within each land use category under the proposed Land Use Plan.

Through the 1970's and 1980's, new growth within the Bakersfield area has occurred primarily in the southwest and, to a lesser extent, in the rural northeast and northwest. In addition, urban boundaries have been expanding as far south as Panama Lane. The plan provides for the continuation of these historical growth patterns by allowing the greatest potential for

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\* Economics Research Associates conducted population projections using three different growth scenarios: low, moderate and high. The consultant determined that the high growth scenario best describes the development trend for the planning area, and this population projection has been used throughout the general plan.

\*\* This assumes an average household size of 2.5 persons per unit.

TABLE II-2

Existing Development, 2010 Demand Development  
and Plan Capacity

<u>Land Use</u>	<u>Existing Land Use (1985)</u>	<u>Market Demand*</u>	<u>2010 Capacity Buildout*</u>	<u>Buildout* Under Current City and County General Plans</u>
Residential				
Acres	29,180	28,155	33,901	44,579
DUs	115,161	112,620	153,856	159,520
Population	285,950	281,550	384,639	398,800
Commercial				
Acres	6,515	1,597	2,480	4,335
Sq.Ft.	15,257,939	20,812,800	46,033,771	59,508,260
Employees		62,556	144,411	178,703
Industrial				
Acres	5,508	2,285	7,825	6,619
Sq.Ft.	8,998,673	18,654,500	49,997,500	41,879,788
Employees		49,709	99,995	33,416

\* Market Demand and buildout figures represent incremental increases above existing land use. Includes assumption of development of southwest center referenced in Figure II-3.

Source: Envicom Corporation, Economics Research Associates

growth in these areas. Where the plan departs from historical trends is in the consolidation of growth around commercial centers and focusing growth along resource amenities.

#### INCORPORATION OF APPROVED SPECIFIC PLANS

State law requirements describing the relationship of specific plans to a city and/or county's general plan are defined in Section I, "Introduction." Adopted city and county specific plans are provided for on the Land Use Plan Map\*.

Adopted city and county specific plans are incorporated by reference as part of the 2010 Plan. The policies and standards of the most restrictive plan shall apply.

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\* Where this plan's land use designations do not reflect precisely the specific plan designations, they do approximate the specific plan designations. For example, this plan's "LR" designation (1-7.26 DU/net acre) approximates the Kern River Plan's 5.35 designation (4-8 DU/acre).

TABLE II-3  
Estimated General Plan Buildout:  
Net Change in Development

<u>Residential</u>	<u>Acres</u>	<u>DU's</u>	<u>Population</u>
ER	7,920.9	7,921	19,802
SR	4,378.9	13,219	33,047
LR	14,462.1	71,729	179,323
LMR	3,080.6	14,712	36,780
HMR	3,226.8	29,491	73,727
HR	<u>831.8</u>	<u>16,784</u>	<u>41,960</u>
TOTAL	33,901.1	153,856	384,639

<u>Commercial</u>	<u>Acres</u>	<u>Square Feet</u>	<u>Employees*</u>
GC	1,759	25,541,966	83,019
HC	116.9	1,528,300	4,589
OC	187.2	6,922,951	20,790
MC	169.7	4,722,474	14,182
MUC	<u>247.2</u>	<u>7,318,080</u>	<u>21,976</u>
TOTAL	2,480	46,033,771	144,411

<u>Industrial</u>	<u>Acres</u>	<u>Square Feet</u>	<u>Employees**</u>
LI	2,716.8	18,999,050	37,998
SI	4,411.5	30,998,450	61,997
HI***	<u>696.5</u>		
TOTAL	7,824.8	49,997,500	99,995

\* Based on 333 square feet/employee.

\*\* Based on 500 square feet/employee.

\*\*\* Due to the low buildings to land ratio of heavy industrial uses, square footage and employee estimates were not calculated.

Note: See Policy 1 for description of each general plan land use category.



GOALS AND POLICIES

The following presents the goals and policies for land use in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed a capital "I" and number in parenthesis which refers to the pertinent implementing program.

GOALS

- 1 Accommodate new development which captures the economic demands generated by the marketplace and establishes Bakersfield's role as the capital of the southern San Joaquin Valley.
- 2 Accommodate new development which provides a full mix of uses to support its population.
- 3 Accommodate new development which is compatible with and complements existing land uses.
- 4 Accommodate new development which channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.
- 5 Accommodate new development which capitalizes on the planning area's natural environmental setting, including the Kern River and the foothills.
- 6 Accommodate new development that is sensitive to the natural environment, and accounts for environmental hazards.
- 7 Establish a built environment which achieves a compatible functional and visual relationship among individual buildings and sites.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions. For ease of implementation, policies have been arranged with respect to land use designations they influence. Those which cannot be categorized by land use designation have been placed in a "General" category or a category designed to better describe the topic addressed by the policy.

## LAND USE DESIGNATIONS

1 Provide for the following types of land uses, as depicted on the Land Use Plan (I-1):

## a) Residential\*

- ° Rural (RR\*\* - minimum 2.5 gross acres/unit): A designation characterized by widely separated rural housing. While some of the lots between 2.5 and 5.0 acres may have public water and/or sewer service, those with 5 acres or more for the most part lack such services.
- ° Estate (ER - minimum 1 net acre/unit): Single-family housing with rural service needs.
- ° Suburban (SR - less than or equal to 4 dwelling units/net acre): Generally non-sewered single-family detached units.
- ° Low Density (LR - less than or equal to 7.26 dwelling units/net acre): Single-family detached housing, typical of tract developments.
- ° Low Medium Density (LMR - City - greater than 4.0 and less than or equal to 10.0 dwelling units/net acre; County - less than or equal to 10 dwelling units/net acre): Composed largely of attached, single-family townhomes, duplexes, and zero lot line developments. May apply to small multiple-family structures, such as triplexes, and mobilehome parks which require a full array of urban services.
- ° High Medium Density (HMR - City - greater than 7.26 and less than or equal to 17.42 dwelling units/net acre; County - less than or equal to 17.42 dwelling units/net acre).

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\* In the 2010 Land Use Plan Map, some areas have been assigned dual designations, such as "LMR/LR" and "SR/LR". The circled designation represents the land use of Kern County. The alternative designation represents the land use should the area become incorporated into the city.

\*\* Land use map designation.

- ° High Density (HR-City-greater than 17.42 and less than or equal to 72.6 dwelling units/net acre; County-less than or equal to 29 dwelling units/net acre): Applies to large multiple-family structures, such as apartments, apartment hotels, and condominiums. This designation would be used in urban centers context.

b) Commercial

- ° Highway (HC- max. .4 FAR\* 3 stories): Services, amenities and accommodations associated with the traveling public located adjacent to or in close proximity to major highways. These may include gas stations, restaurants, motels, and RV parks.
- ° General (GC- max. 1.0 FAR, 4 stories): Retail and service facilities providing a broad range of goods and services which serve the day-to-day needs of nearby residents.
- ° Major (MC- max. 1.0 FAR, 6 stories): Concentrated large-scale retail operations providing a broad range of goods and services which serve a market area of many square miles.
- ° Office (OC- max. 1.0 FAR, 4 stories): Business and professional office uses, and specialty retail.
- ° Mixed Use (MUC- max. 3.0 FAR, 12 stories): Major commercial centers combining professional office, major retail and commercial support services. This core designation to a center's development would be warranted for development characteristic of a concentrated area within the city. It provides the opportunity for integration of medium and high density residential uses. The purpose of this zone is to encourage residential uses in conjunction with commercial activities in order to create an active street life, enhance personal safety by ensuring the presence of people in the streets at different times, and promote the vitality of businesses.

c) Downtown Mixed Use\*\*

- ° High Medium Density Residential (D1-greater than 10.0 and less than or equal to 17.42 units/net acre) with Major Commercial (1.0/2.0 FAR, 100'/150' height)

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\* Floor Area Ratio (FAR) = Gross building area divided by net parcel area.

\*\* These categories are incorporated from the City of Bakersfield Downtown Redevelopment Plan Element. Where redevelopment zones have multiple FAR and height standards which apply to specific segments in the zone, all standards which apply to the zone are presented.

- High Medium Density Residential (D2-greater than 10.0 and less than or equal to 17.42 units/net acre) with Office Commercial (.5 FAR, 45' height)
- High Medium Residential (D3-greater than 10.0 and less than or equal to 17.42 units/net acre) with Major Commercial and Office Commercial (1.0/2.0/3.0 FAR, 100' height).
- High Density Residential (D4-greater than 17.42 and less than or equal to 72.6 dwelling units/net acre) with Major Commercial (1.0 FAR, 100' height).
- High Density Residential (D5-greater than 17.42 and less than or equal to 72.6 dwelling units/net acre) Residential with Major Commercial and Office Commercial (1.0, 1.5, 3.0 FAR, 150' height).

d) Industrial

- Light (LI- 1.0 FAR, 6 stories): Unobtrusive industrial activities that can locate in close proximity to residential and commercial uses with a minimum of environmental conflicts.
- Service (SI- .4 FAR, 6 stories): Industrial activities which involve outdoor storage or use of heavy equipment. Such uses produce significant air or noise pollution and are visually obtrusive.
- Heavy (HI- .4 FAR, 14 stories): Large-scale industrial activity which is usually land intensive and incompatible with other land uses because of potential severe environmental impacts.

e) Resource

- Intensive Agriculture (R-IA - minimum 20-acre parcel size): Areas devoted to the production of irrigated crops, or having the potential for such use.
- Extensive Agriculture (R-EA - minimum 80-acre parcel size for lands under "Williamson Act" contract; 20-acre minimum, lands not under contract): Agricultural uses involving large amounts of land with relatively low value-per-acre yields such as livestock grazing, dryland farming, and woodlands.
- Mineral and Petroleum (R-MP - minimum land use designation size - 5-acres): Areas which contain producing, or potentially productive, petroleum fields and mineral deposits. This designation may be used in combination with other designations.



## f) Public Facilities

- ° Public Facilities (P): includes government buildings, hospitals, public utilities, cemeteries, sewage treatment plants, waste disposal sites and other publicly owned facilities.
- ° Public and private schools (PS)
- ° Public Transportation (PT): Existing airports and railroads whose future use is restricted to transportation related uses.
- ° Solid Waste Facility Sites (P-SW): Includes solid waste disposal sites, transfer stations and related resource recovery activities.

## g) Open Space

- ° Open Space (OS): Floodplains and Resource Management Areas. Agriculture uses are also permitted.
- ° Parks (OS-P): Includes all city and county parks as well as public and private recreation facilities.
- ° Slopes (OS-S): Areas with greater than or equal to thirty percent slope. Slope areas are to be better defined by an overlay zone or hillside development standards.

## RESIDENTIAL DEVELOPMENT

- 2 Allow for the development of a variety of residential types and densities (I-1).
- 3 Ensure that residential uses are located in proximity to commercial services, employment centers, public services, transportation routes, and recreational and cultural resources (I-1).
- 4 Encourage maintenance of the residential character of specially identified neighborhoods through such mechanisms as architectural design, landscape, and property setbacks (I-1, I-7, I-8).
- 5 Provide for streetscape improvements, landscape, and signage which uniquely identify major and/or historic residential neighborhoods (I-8).
- 6 Retain existing residential neighborhoods as designated on the Land Use Plan, and allow for the infill of residential land uses which are compatible with the scale and character of the surrounding neighborhood (I-1).

- 7 Provide for the retention of historic residential neighborhoods as identified in the Historical Resources Element (I-1, I-6, I-8).
- 8 Provide the opportunity for the development of residential units in areas designated for commercial use provided that conflicts between the two can be adequately mitigated (I-1).
- 9 Permit the conversion of existing single-family neighborhoods to higher densities in those areas in which (1) there are physical and economic conditions which warrant the replacement of existing units, (2) the uses are contiguous with other higher density uses, and (3) adequate infrastructure services are available and/or provided for by developers (I-1).
- 10 Accommodate high and high-medium density residential adjacent to existing and planned commercial, multi-family, and principal transportation corridors (I-1).
- 11 Encourage that all new high and high-medium density residential designations be on a contiguous area of at least five acres (I-1)  
  
Allow for the intensification and development of existing high and high-medium areas, regardless of size (I-1).
- 12 Require that new multiple family residential projects incorporate design features such as screen walls and height and setback restrictions which foster compatibility with adjacent existing and future single family residential uses (I-1, I-6, I-8).
- 13 Require all multi-family residential land uses be adequately set back from the street (I-1).

#### COMMERCIAL DEVELOPMENT

- 14 Allow for the development of a variety of commercial centers/corridors which are differentiated by their function, intended users and level of intensity, including convenience centers serving local residential neighborhoods, sub-regional centers which serve groupings of neighborhoods, and major regional centers which serve the planning area and surrounding areas (I-1)
- 15 Allow for the development of a variety of commercial uses, including those which serve residents (groceries, clothing, etc.), highway users, and tourists-visitors (I-1).

- 16 Ensure that adequate lands are set aside for neighborhood-serving commercial uses adjacent to designated residential areas. Where land has not been set aside, permit neighborhood scale commercial uses in residential areas when compatible with surrounding development (I-1).
- 17 Require all new commercial designations be assigned to sites where the aggregate of all contiguous parcels designated for commercial use is no less than five (5) acres, except for approved specific plans, parcels to be developed for highway-oriented service uses at freeway on- and off-ramps, or where physical conditions are such that commercial is the only logical use of the property  
  
Allow for the intensification and development of existing commercial areas in an infill fashion (I-1).
- 18 The depth of new commercial developments shall be at least half the length of the street frontage. Exceptions may be made where existing development or physical constraints provide a more logical shape (I-2).
- 19 Encourage a separation of at least one-half mile between new commercial designations (I-1).
- 20 Locate major (regional) commercial uses in proximity to existing regional centers (such as Valley Plaza and East Hills Mall), and in proximity to future regional serving commercial centers in the downtown, southwest, northwest, and northeast, as designated on the Land Use Policy Map (I-1).
- 21 Promote the recycling of block-long corridors of commercial uses so as to consolidate new commercial uses (I-1, I-5, I-10).
- 22 Encourage the clustering of commercial development in compact areas, rather than extended along streets and highways (I-1).
- 23 Provide for infill of commercial land uses to be compatible with the scale and character of existing commercial districts and corridors (I-1).
- 24 Encourage adjacent commercial uses to be of compatible height, setback, color and materials (I-1, I-6, I-8).
- 25 Require that new commercial uses maintain visual compatibility with single-family residences in areas designated for historic preservation (I-1, I-6, I-8).

- 26 Require that commercial development provide design features such as screen walls, landscaping and height, setback and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to noise, traffic, parking, and differences in scale (I-1, I-6, I-8).
- 27 Require that automobile and truck access to commercial properties sited adjacent to designated residential parcels be located at the maximum practical distance from the residential parcel (I-1, I-6).
- 28 Street frontages along all new commercial development shall be landscaped (I-1).

#### INDUSTRIAL DEVELOPMENT

- 29 Allow for a variety of industrial uses, including land-extensive mineral extraction and processing, heavy manufacturing, light manufacturing, warehousing and distribution, transportation-related, and research and development uses (I-1).
- 30 Protect existing industrial designations from incompatible land use intrusions (I-1, I-6, I-8).
- 31 Encourage the efficient use of existing industrial land uses through consolidation of building and storage facilities (I-1, I-6, I-8).
- 32 Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors (I-1).
- 33 Encourage upgrading of visual character of heavy manufacturing industrial areas through the use of landscaping or screening of visually unattractive buildings and storage areas (I-1, I-6, I-8).
- 34 Require that industrial uses provide design features, such as screen walls, landscaping and height, setback and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound and vibration (I-1, I-6, I-8).
- 35 Street frontages along all new industrial development shall be landscaped (I-1, I-6, I-8).
- 36 Minimize impacts of industrial traffic on adjacent residential parcels through the use of site plan review and improvement standards (I-1, I-6).



## CENTERS DEVELOPMENT

- 37 Enhance existing and establish new centers as the principal focus of development and activity in the planning area, around which other land uses are grouped. Centers should be linked by adequate transportation facilities and may be linked to the Kern River, canals, or other resource amenities. Centers may be differentiated by functional activity, density/intensity, and physical character (I-1, I-6, I-8).
- 38 Provide for the enhancement and intensification of existing activity areas such as (I-1):
- a) Downtown
  - b) California State University, Bakersfield
  - c) Bakersfield Airpark/Casa Loma
  - d) Meadows Field
  - e) Highway 58/Weedpatch Highway
- 39 Provide for the intensification of downtown Bakersfield for governmental, financial, professional office, retail, residential, cultural, specialty, and supporting uses (I-1).
- 40 Provide for the revitalization of downtown Bakersfield by the use of redevelopment authorities provided by California law, including the provision of incentives for new private development projects, joint private-public partnerships, and public improvements; accommodating the range of land uses defined for this "Center" (I-1, I-5, I-8, I-10).
- 41 Encourage renovation and the adaptive reuse of significant cultural and entertainment facilities downtown (I-5).
- 42 Provide for the establishment of the following new major centers as the focus of development in the planning area (I-1):
- a) Southwest
  - b) Northwest
  - c) Northeast
- 43 Allow for the development of a center in southwest Bakersfield which is a focal point of activity and includes a mix of professional office and retail uses, moderate density residential, and filters outward to lower suburban-type densities, according to the following principles (I-1):
- a) encourage focus on an open space amenity such as a park or water body;
  - b) provide opportunity for the development of residential units above ground floor commercial;

- c) encourage land use link with the Kern River and promote pedestrian activity within center.
- 44 Allow for the development of a center in northwest Bakersfield to serve the Rosedale Community and adjacent rural areas, containing retail commercial, light industrial, moderate and high density residential, and is surrounded by low and estate residential densities, according to the following principles (I-1):
- a) attempt to focus on open space amenities;
  - b) promote pedestrian activity and where feasible attempt to link land uses with the Kern River.
- 45 Allow for the development of a low density "village-like" center in the Northeast as a focal point of activity which includes retail commercial, professional offices, moderate and high density residential, and filtering outwards to lower densities, according to the following principles (I-1, I-6, I-8).
- a) attempt to focus on open space amenities;
  - b) cluster development to take advantage of views;
  - c) encourage development to preserve public views of foothill topography and sensitive habitats;
  - d) provide the opportunity for the development of residential units above ground floor commercial;
  - e) promote pedestrian activity and use of greenbelt links between land uses.
- 46 Enhance pedestrian activity in principal activity centers of the planning area (I-6, I-8).
- 47 Encourage development of pedestrian sensitive uses and design characteristics in the following areas (I-1):
- a) Downtown
  - b) Baker Street
  - c) Southwest Center
  - d) Northwest Center
  - e) Northeast Center

#### PUBLIC FACILITIES

- 48 Coordinate with the appropriate agencies so that adequate land and facilities are set aside for schools, parks, police/fire, libraries, cultural facilities, recreational facilities and other service uses to serve the community (I-2).

- 49 Encourage the continued development of California State University Bakersfield and adjacent areas for education, cultural, and supporting commercial and residential uses (I-1).
- 50 Locate new development where infrastructure is available or can be expanded to serve the proposed development (I-12).
- 51 Ensure that land use and infrastructure development are coordinated (I-2, I-6, I-12).
- 52 The developer shall be responsible for all on-site costs incurred as a result of the proposed project, in addition to a proportional share of off-site costs incurred in service extension or improvements. The availability of public or private services or resources shall be evaluated during discretionary project consideration. Availability may affect project approval or result in a reduction in size, density, or intensity otherwise indicated in the general plan's map provisions (I-6, I-11).
- 53 Provide for the mitigation of significant noise impacts on adjacent sensitive uses from transportation corridor improvements (I-6, I-7).
- 54 Review and evaluate the land use designations of the plan on agreement of a final route alignment of the Route 178/58 Freeway, and any other future freeways, to ensure appropriate land use relationships, including (I-6, I-7):
  - a) adequate setbacks, buffers, and/or restrictions on residential density to prevent noise impacts;
  - b) potential for commercial services at principal off-ramps;
  - c) potential for industrial uses which can benefit by close freeway proximity.

#### SIGNAGE

- 55 Coordinate a consistent design vocabulary between city and county for all public signage, including fixture type, lettering, colors, symbols, and logos (I-1, I-6).
- 56 Provide signage which is adequately spaced and clearly visible during the day and night to control vehicular traffic, bicycles, and pedestrians (I-1, I-6).
- 57 Encourage the use of creative and distinctive signage which establishes a distinctive image for the planning area and identifies principal entries to the metropolitan area, unique districts, neighborhoods and locations (I-1, I-6).

- 58 Permit the use of well-designed banners for civic events, holidays, and other special occasions (I-1, I-6).
- 59 Encourage that signs be designed and placed on buildings to be visible to pedestrians in areas designated for pedestrian activity (I-1, I-6).
- 60 Prohibit the use of private, permanent signs in residential neighborhoods, except those for identification, sales and rental of property (I-1, I-6).

## IMAGE

- 61 Develop a distinctive identity for the Bakersfield region which differentiates it as a unique place in the Southern San Joaquin Valley (I-1, I-6, I-8).
- 62 Capitalize on the Kern River, parks, steep hills, and canals as organizational elements for the Bakersfield area, creating activity corridors around which development and recreational uses can be focused (I-6, I-7, I-8).
- 63 Allow variation in the use of street trees, shrubs, lighting, and other details to give streets better visual continuity. (I-1, I-6, I-8).
- 64 Provide for the installation of street trees which enhance pedestrian activity and convey a distinctive and high quality visual image (I-6, I-8).
- 65 Encourage landscaping the banks of flood control channels, canals, roadways and other public improvements with trees to provide a strong visual element in the planning area (I-1, I-4, I-6, I-8).
- 66 Promote the establishment of attractive entrances into communities, major districts, and transportation terminals and corridors within the planning area (I-6, I-8).
- 67 Promote the creation of both residential and commercial historic districts, and encourage the upgrading of historic structures (I-1, I-6, I-8).
- 68 Encourage the establishment of design programs which may include signage, street furniture, landscape, lighting, pavement treatments, public art, and architectural design (I-1, I-6, I-8).

## GENERAL

- 69 Provide adequate land area for the expansion of existing uses and development of new uses consistent with the policies of the general plan (I-1).



- 70 Provide for a mix of land uses which meets the diverse needs of residents; offers a variety of employment opportunities; capitalizes, enhances, and expands upon existing physical and economic assets; and allows for the capture of regional growth (I-1).
- 71 Allow for the continuance of agricultural uses in areas designated for future urban growth (I-1).
- 72 Accommodate new projects which are infill or expansion of existing urban development (I-1).
- 73 Provide for an orderly outward expansion of new "urban" development (any commercial, industrial, and residential development have a density greater than one unit per acre) so that it maintains continuity of existing development, allows for the incremental expansion of infrastructure and public services, minimizes impacts on natural environmental resources, and provides a high quality environment for living and business (I-11).
- 74 Allow for flexibility in the specific siting of multi-family residential and commercial uses from the locations generally depicted on the Land Use Map in areas which are undeveloped, used for resource production, or are developed at very low densities through Planned Unit Development, Planned Commercial Developments and Specific Plans, provided that: (I-2, I-3, I-6):
  - a) the overall density and distribution of land uses is maintained;
  - b) multi-family and commercial uses are located in proximity to principal roadways, public transit, employment nodes, commercial services, and recreational uses and within 330 feet of the location depicted on the Land Use Policy Map;
  - c) uses are sited to take advantage of pedestrian green-belts, recreational amenities, and natural environmental resources;
  - d) the availability of infrastructure to the site or adjacent service areas is not adversely impacted.
- 75 Preserve existing significant sound residential neighborhoods, commercial districts, and industrial areas (I-1, I-6, I-8).
- 76 Provide for the use of redevelopment authorities in other locations of the metropolitan area which California Redevelopment law has determined as blighted (I-5).

- 77 Provide incentives to upgrade deteriorating residential, commercial and industrial uses when the property owner or resident cannot afford improvements (I-10).
- 78 Encourage the revitalization of deteriorated land uses and buildings (I-5, I-9).
- 79 Encourage infill of vacant parcels (I-10).
- 80 Encourage the recycling of dilapidated and economically-depressed residential neighborhoods, commercial districts, and industrial areas, where preservation is not an achievable or desirable objective (I-5, I-10).
- 81 Encourage new uses and buildings in pedestrian sensitive areas to incorporate design characteristics which include (I-1, I-6 I-8):
  - a) walls which are aesthetically treated by the use of color, materials, offset planes, columns, and/or other architectural details, to provide visual interest to pedestrians;
  - b) landscaping, including trees, flowering shrubs, and ground cover;
  - c) pedestrian amenities, such as benches, trash receptacles and signage oriented to the pedestrian;
  - d) design amenities related to the street level such as awnings, arcades, and paseos;
  - e) visual access to the interior of buildings;
  - f) uses other than parking and traffic circulation between the sidewalk and building.
- 82 Encourage the development of a range of child care facilities including small and large family day care homes and public and private care centers (I-13).
- 83 Encourage employers and developers of employee-intensive commercial and industrial projects to provide facilities or referral services for the child care needs of employees (I-14).
- 84 In the county, all residential developments that provide complete public infrastructure improvements including community water distribution and sewage collection and treatment systems may be permitted a density increase up to 20 percent. All land division activities shall be consistent with this provision (I-1).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Land Use Element. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

1 Amend the Zoning Ordinance

The principal method by which cities and counties implement land use policy is through the zoning ordinance. The authority to zone is inherent in the police power delegated to cities by the California Constitution and is authorized by the Government Code. The zoning ordinance consists of two basic elements: (1) a map which delineates the boundaries of districts in which like uses developed at like standards are permitted and (2) text which explains the purpose of the zoning district, lists permitted uses and those permitted under special conditions, and standards for development (e.g., minimum lot size, density, height, setbacks, lot coverage, parking requirements, and so on). By law (G.C. Sec. 65860), the zoning ordinance must be consistent with the general plan.

The City of Bakersfield and Kern County will need to evaluate their ordinances and may prepare revised zoning ordinances to reflect the land use policies and standards contained in this plan.

The following lists the principal changes to the zoning ordinances which will be necessary. Specific revisions may require ordinance rewrite.

- a) The zoning maps may require revision to reflect the land use plan map.
- b) Land use zoning and development standards may need to be changed to reflect general plan land use policies and designations.
- c) Provisions and standards for an "Architectural Overlay" may need to be adopted in the city. The purpose of this zone would be to maintain the physical character within areas identified and adopted as historical areas depicted in the Historical Resources Element.
- d) The floor area ratio approach to height and bulk regulation may be adopted as an alternative to present restrictions of height, bulk and coverage.

## 2 Subdivision Regulations

Subdivision regulation is required by state law to control the manner in which land is divided. Like the zoning ordinance, it must be consistent with the general plan. Local subdivision regulations should be reviewed and amended as appropriate to reflect the land use goals, objectives, policies and standards.

## 3 Specific Plans

State law (G.C. Sec. 65450) authorizes cities and counties to prepare Specific Plans for the systematic implementation of the general plan for all or part of the area covered by the general plan. Specific Plans are intended to provide more definite specifications of the type of uses to be permitted, development standards (setbacks, heights, landscape, architecture, etc.) and circulation and infrastructure improvements.

## 4 Development Agreements

Development agreements are authorized by state law to enable a city or county to enter into a binding contract with a developer which assures the jurisdiction as to the type, character and quality of development and additional "benefits" which may be contributed, and assures the developer that the necessary development permits will be issued regardless of changes in regulations.

This ensures that a developer of a multi-phased project who has based his or her project financing on conditions negotiated with the jurisdiction at a particular time would not be adversely affected by subsequent more restrictive regulations. This, in turn, enables the jurisdiction to extract additional contributions and benefits from the developer. This is a technique which may be used in lieu of a specific plan and other large development projects not requiring an increase in buildable area or height.

## 5 Redevelopment

California, through the Community Redevelopment Law (Health and Safety Code Sections 33000 et. seq.) authorizes cities and counties to undertake redevelopment projects to revitalize blighted areas. An adopted plan provides additional tools to effectuate productive change. These include the use of tax increment (i.e., amount of additional tax revenue above a "frozen" base generated by increased property valuation resulting from new development in the project area), property acquisition, consolidation of small parcels, joint public-private partnerships, clearance of land and resale to developers, and relocation of tenants. The City of Bakersfield has



an adopted Redevelopment Plan for a portion of the downtown area. Additionally, the city has adopted an element which sets forth policies, standards, and implementation programs for the city's 805.4-acre central business district. Chapter IX of this plan (Economic Development) provides additional redevelopment strategies to initiate reinvestment downtown, and calls for the creation of new redevelopment project areas. The county does not use redevelopment law.

## 6 Development Review

- a) In the City of Bakersfield development and building improvements requiring a building permit (except for single-family residences) are subject to review according to their adherence with city standards, regulations and policy for issuance of a Development Permit. Planned Unit Developments and Planned Commercial Developments are subject to review by the Planning Commission in formal public hearings. Other projects are subject to review and approval by staff. This process provides a forum by which development projects can be assessed for compliance with the goals, policies, and standards for this plan.
- b) Any development within the following county zone classifications require approval of a Special Development Standards Plot Plan Review: R-2, R-3, C-O, C-1, C-2, CH, M-1, M-2, and M-3. This review enables the county to formally review projects for compliance with urban development standards and obtain necessary street dedications and improvements. The review is performed at the staff level, therefore public hearings are not held on these projects. Projects within most other zone classifications are not formally reviewed, rather the project is reviewed at the building permit stage. Urban development standards are not imposed.

The above projects are considered ministerial. However, some of the projects that the county reviews are discretionary. The following projects are heard at a public hearing with the Director of Planning and Development Services acting as hearing officer: Precise Development Plans, Cluster Combining Development Plans, Large Family Day-Care Permits, and Zone Modifications. The Kern County Board of Zoning Adjustment considers the following projects at a public hearing: Conditional Use Permits, Zone Variances, Surface Mining Permits/Reclamation Plans, and Secondary Residential Units. The Director can hear some of the projects in lieu of the BZA and vice versa under some circumstances.

Projects considered ministerial are not reviewed for consistency with the general plan, whereas discretionary projects must be consistent with the general plan.

7 Environmental Review

Local guidelines for project processing shall reflect California Environmental Quality Act (CEQA) Guidelines which state that the environmental effects of a project must be taken into account as part of project consideration.

8 Design Review

The goals, objectives, policies and standards contained in the Land Use Element encourage architectural and site compatibility in designated areas. Procedures of the respective jurisdictions will provide the vehicle by which the concept is implemented.

9 Code Enforcement

The City of Bakersfield and County of Kern shall maintain an on-going program of code enforcement.

10 Economic Development

A coordinated economic development program would contribute to successful implementation of land use policies. This will include incentives for the development of low and moderate income housing and the attraction of new businesses and industry to the metropolitan area. It may also include low interest loans and grants for commercial and residential renovation and rehabilitation.

11 Capital Improvements

The Capital Improvement Program is required to be consistent with the general plan and applicable specific plans. Appropriate plan proposals should be programmed into city and county Capital Improvement Programs. Revenue sources may include general fund monies, general obligations bonds, benefit assessment districts, subventions and tax increment generated by redevelopment.

12 Review of discretionary development projects proposing urban densities and land use intensities shall consider the ability of local jurisdictions to provide logical, economic extensions of urban services to such development.

- 13 Permit small and large family day care homes in all residential land use designations.
- 14 Investigate the feasibility of establishing a child care coordinator position to work with child care providers and new commercial/industrial development for the provision of child care programs.







## CHAPTER III – CIRCULATION ELEMENT

### STATUTORY REQUIREMENTS:

Government Code Section 65302(b) requires a circulation element in all city and county general plans, as follows:

A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals and facilities, all correlated with the land use element of the plan.

As outlined in the State Office of Planning and Research "General Plan Guidelines," the Circulation Element contains the following:

- Identification and analysis of circulation needs and issues;
- A statement of goals, objectives and policies based on the total circulation needs of the community;
- A diagram, map or other graphic representation showing the proposed circulation system;
- A description of the proposed circulation system and the inter-relationships among system parts;
- Standards and criteria for the location, design, operation and levels of service of circulation facilities; and
- A guide to the implementation of the circulation system.

Several travel modes comprise the Bakersfield transportation system. Persons travel by autos, buses, trains, airplanes, bicycles and on foot. Freight transportation modes include trucks, trains, and airplanes. Other facilities include canals to move water and pipelines and powerlines to transport energy.

Among these many systems, the street system is the most visible and most important to Bakersfield residents. Over 90% of all travel in the city is by automobiles and trucks. General plan development, therefore, has been focused largely on the street system. Policies are included for all modes however in recognition of the roles they play in serving the diverse needs of Bakersfield residents.

The following sections discuss the background and important issues of each mode. Policies are listed for each mode to guide future development.

## A. STREETS

OVERVIEW OF EXISTING CONDITIONS

The street system has been, and will continue to be, the most important element of the transportation system. Streets have been developed in a grid pattern with arterials spaced at one-mile intervals, except in the central area where spacing is closer (see Figure III-1). In the older areas of the city, collector streets are spaced at half-mile intervals between arterials, also in a grid pattern. Motorists use these collectors for through travel to some extent, avoiding parallel arterials. In newer areas, the collectors are aligned in irregular patterns to discourage through traffic.

Overlaid on the basic network of arterials and collectors is a limited freeway system. Route 99, with four to six travel lanes, is the only existing north-south freeway. As the major Central Valley connector in California, Route 99 carries large numbers of through vehicles in addition to local Bakersfield traffic. Route 58 is an east-west freeway linking Route 99 with cities east of Bakersfield. It carries much less traffic than Route 99. The other freeways in the metro area are the portion of Route 204 between Route 99 and Route 58 and the portion of Route 178 between M Street and Fairfax Road. Because of its location in a highly traveled corridor, Route 178 carries large traffic volumes despite its lack of continuity.

The City of Bakersfield, Kern County, and Caltrans all count daily traffic volume on a regular basis. Figure III-2 shows recent selected counts on the freeways and arterials. The City of Bakersfield counts are from 1985, and the Kern County and Caltrans counts are from 1984. Traffic volume on most streets in the metro area is relatively light, although some segments become busy at times. Streets with relatively heavy volume (greater than 30,000 vehicles per day) include the following:

<u>Street</u>	<u>Maximum Daily Volume</u>
Highway 99, California to S.R. 178	91,000
Highway 58, from 99 to Union Avenue	58,000
Highway 178, from 99 to M Street	43,000
California Avenue, from Real Road to 99	38,000
Rosedale Highway, from Fruitvale Avenue to 99	37,000
Ming Avenue, from Stine Road to Castro Lane	35,700
Airport Drive, south of Roberts Lane	32,500
Union Avenue, from Brundage Lane to 58	32,000

In general, the existing street system operates smoothly. Points of congestion are beginning to appear, however, as a result of two phenomena. The city is increasing in population and geographical area, thereby placing greater demands on the street system. Secondly, physical barriers have disrupted the grid of arterial streets and the freeway system, leading to discontinuities. Physical barriers include the Kern River, canals, railroad tracks, and (in the case of freeways) established residential neighborhoods.

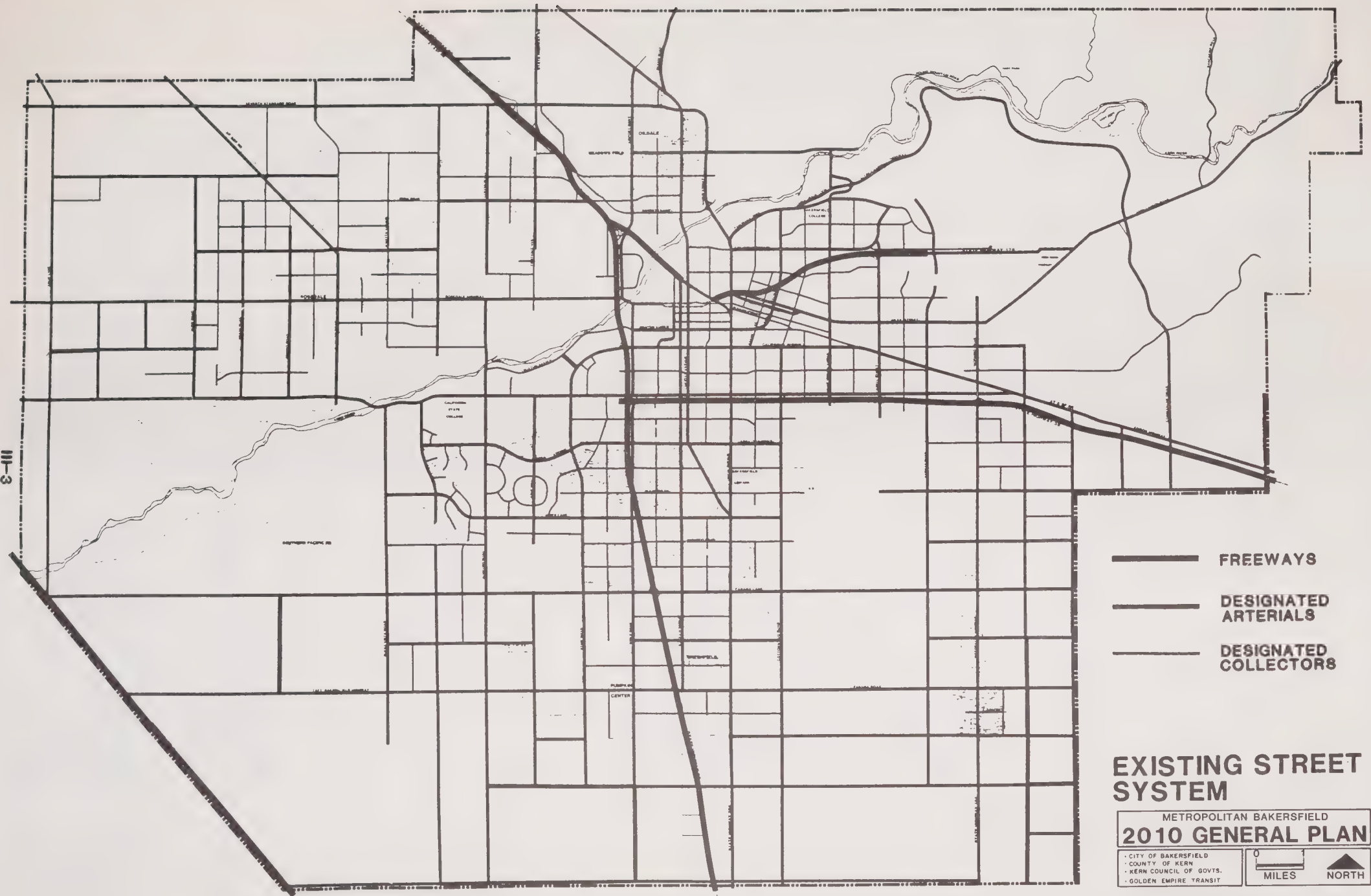
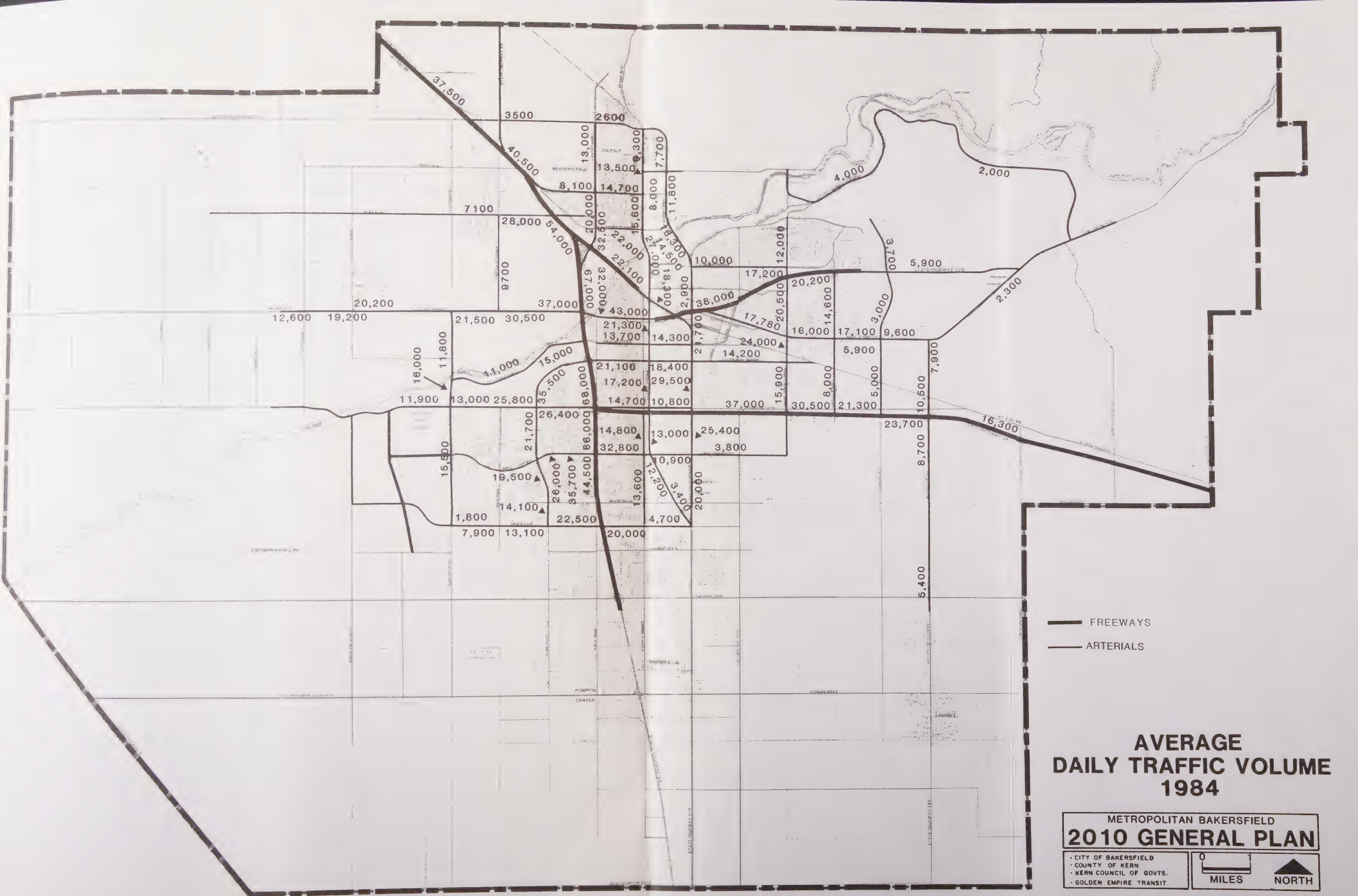


FIGURE III-1











The city and county both have standard design specifications for arterial, collector, and local streets, although the standards are somewhat different. Standard arterials are 90 feet wide in 110 feet of right-of-way. In this 90 feet, the city design calls for six lanes, and the county has four lanes. Both have a raised median; the county allows parking and the city does not. Standard collector streets (both city and county) have four lanes, 68 feet of pavement width in 90 feet of right-of-way, with parking and no median. Standard local streets are 36 to 44 feet wide. Many arterial and collector streets, however, are smaller than the standard designs because they were built before the standards became effective. These sub-standard streets also contribute to congestion. As properties fronting the sub-standard streets develop or redevelop, the full width is required, resulting in streets with alternating wide and narrow stretches. Eventually the street will be full width, but the process takes several years.

To determine how well the street system is presently operating, traffic volume can be compared to roadway capacity. The table below shows street capacities, using standard traffic engineering assumptions.

<u>Roadway Type</u>	<u>Roadway Capacities</u>	<u>Daily Traffic Capacity</u>
6-lane freeway		112,500 vehicles
4-lane freeway		75,000 vehicles
6-lane arterial		45,000 vehicles
4-lane arterial		30,000 vehicles
4-lane collector		25,000 vehicles
2-lane collector		12,500 vehicles

\* Based on Highway Capacity Manual, 1965, Highway Research Board.

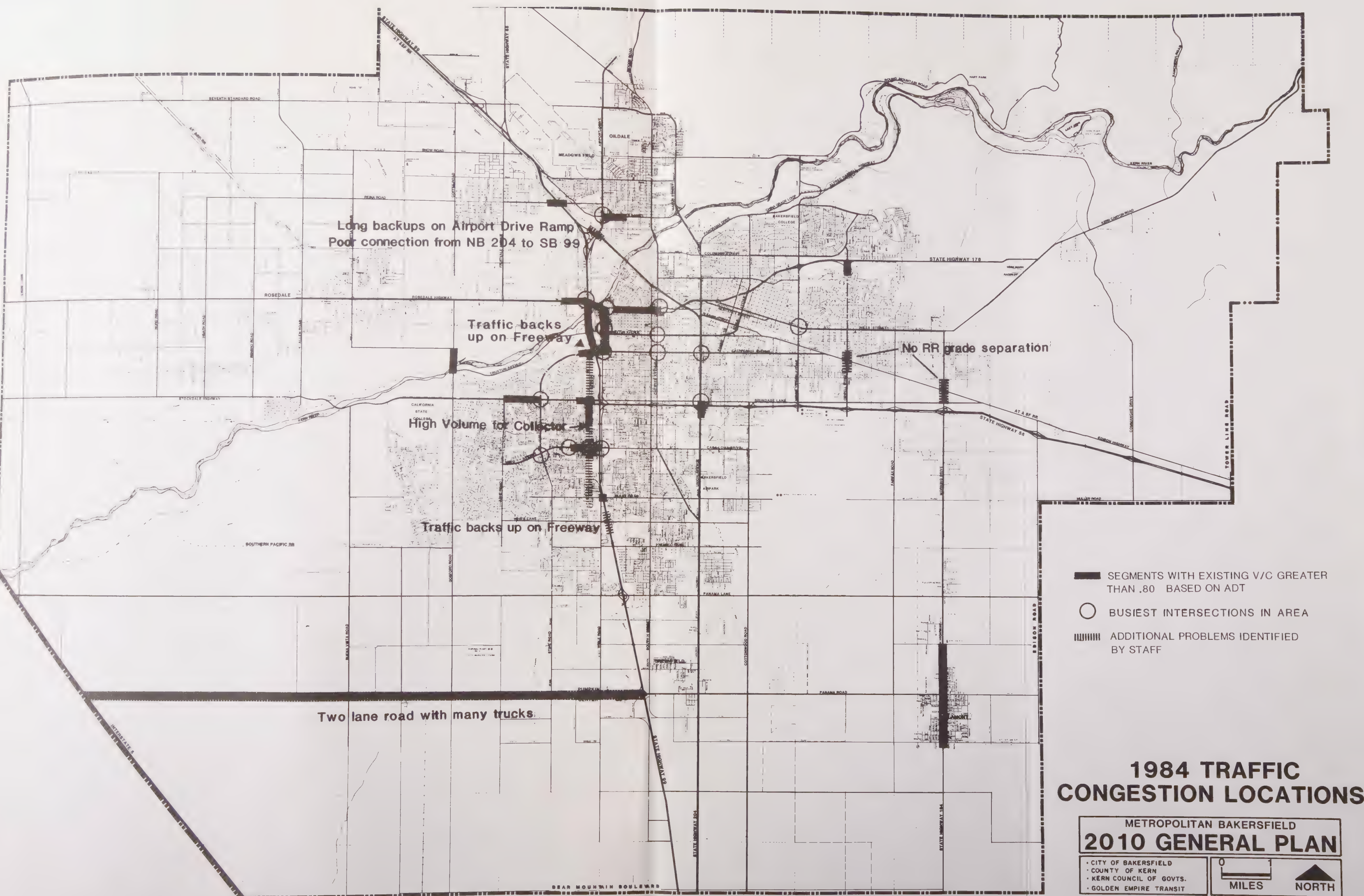
Any street segment with a volume-to-capacity ratio greater than .80 will experience some degree of congestion. Figure III-3 shows street segments with less than 20 percent of capacity remaining and shows other parts of the street system with circulation problems.

Congestion occurs on numerous streets where they cross Highway 99, including Olive Drive, Rosedale Highway, California Avenue, Stockdale Highway, Ming Avenue, Planz Road, and White Lane. Freeway interchanges with Congestion or other problems include Golden State/99/Airport Drive, 178/Mt. Vernon, 178/Oswell, 99/Rosedale, 99/California, 99/White and 58/Union Avenue. Other parts of the circulation system where volume is approaching capacity include the following:

1. Rosedale Highway near Highway 99
2. Highway 178 from Highway 99 to M Street
3. Oak Street from California Avenue to 24th Street
4. Highway 99 between Rosedale Highway and California Avenue
5. Stockdale Highway near California Avenue
6. Ming Avenue from New Stine Road to Valley Plaza
7. California Avenue around Highway 99
8. Real Road between California Avenue and Ming Avenue
9. Coffee Road across the Kern River
10. Roberts Lane just east of Airport Drive



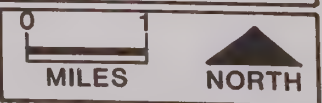




# 1984 TRAFFIC CONGESTION LOCATIONS

METROPOLITAN BAKERSFIELD  
**2010 GENERAL PLAN**

- CITY OF BAKERSFIELD
- COUNTY OF KERN
- KERN COUNCIL OF GOVTS.
- GOLDEN EMPIRE TRANSIT







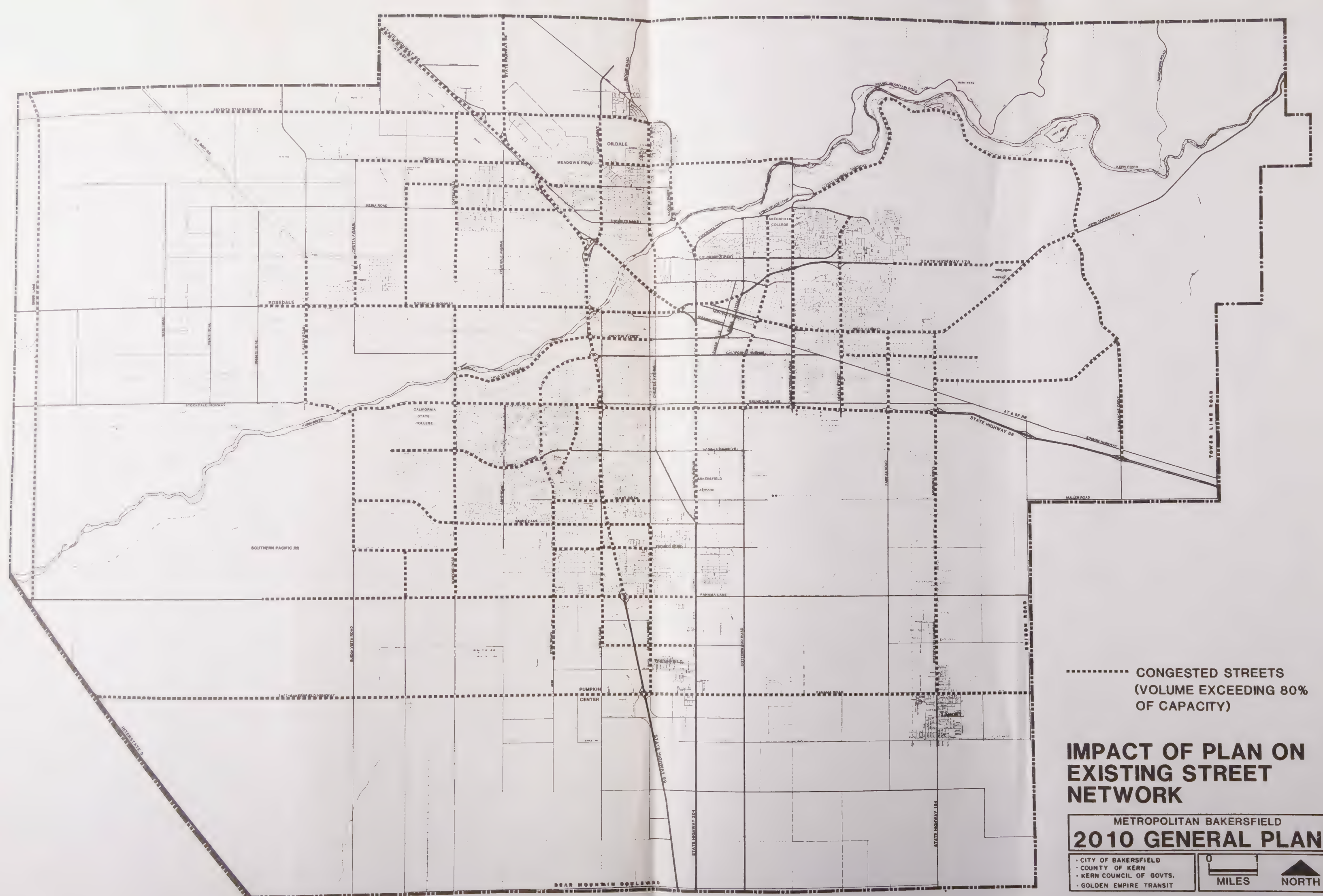
Signalized intersections are the primary constraints to capacity on the arterials. Figure III-3 also shows the sixteen busiest intersections in the metro area. The busiest is the Stockdale Highway/California Avenue intersection, which handles a volume of 56,000 vehicles per day. Other busy intersections are concentrated along Ming Avenue, Oak Street, Chester Avenue, and Union Avenue. Many of these intersections are congested during peak hours. Others have sufficient turn lanes so that traffic doesn't back up, but cycle lengths are long and most vehicles experience delay. In either case, these intersections represent bottle-necks.

The 2010 land use plan, when built out, will add significantly to the area's population and employment base. Existing areas of the city will increase in land use intensity, and to a larger extent, geographic expansion of the city will occur. Major expansion areas include the southwest, northwest (Riverlakes Ranch), and northeast (Rio Bravo). This will lead to an accompanying increase in travel. Specifically, the plan calls for an increase of 154,000 households and 244,000 jobs. These increases will cause traffic volume to more than double. Daily vehicle trips will increase by 1.6 million to a total of 2.6 million.

A computerized travel demand model of Kern County was used to estimate the impact of the new trips on the existing street system. Figure III-4 shows that several streets would be congested (volume greater than 80 percent of capacity), unless new streets are built. Congestion would occur in the new growth areas where the street network is presently incomplete. These areas include the southwest, the northwest (Riverlakes Ranch) and the northeast (Rio Bravo). Although the street network is more mature, the airport area would also experience congestion due to growth. Two of the existing freeways in the area (Freeway 99 and Highway 58) would experience congestion due to increased regional travel demand. Increased regional demand would also overload the Taft-Bakersfield Highway/Panama Road and Enos Lane. Rosedale Highway, Truxtun Avenue, California Avenue, and Stockdale Highway would be overloaded due to increased demand for travel between downtown Bakersfield and the areas west of Highway 99. Growth in the downtown would also contribute to congestion on Route 178 and the Golden State Highway (SR 204). The general intensification of land use throughout the planning area would contribute to congestion on other existing arterials, including Morning Drive, Fairfax Road, Oswell Street, Mt. Vernon Avenue, Haley Street, Union Avenue, Ming Avenue, White Lane, Panama Lane, and Pacheco Road.







----- CONGESTED STREETS  
(VOLUME EXCEEDING 80%  
OF CAPACITY)

# **IMPACT OF PLAN ON EXISTING STREET NETWORK**

METROPOLITAN BAKERSFIELD <b>2010 GENERAL PLAN</b>	
<ul style="list-style-type: none"> <li>• CITY OF BAKERSFIELD</li> <li>• COUNTY OF KERN</li> <li>• KERN COUNCIL OF GOVTS.</li> <li>• GOLDEN EMPIRE TRANSIT</li> </ul>	<div> <div>0</div> <div>1</div> </div> <div> MILES </div> <div>  NORTH </div>



STREET CIRCULATION ISSUES

A detailed analysis of existing traffic conditions and projected development indicates that the circulation plan must address the following specific issues:

- High and increasing demand in the travel corridors connecting the northeast and the southwest, the northwest and the southwest, and the northwest and the northeast.
- Need for more high-speed freeways.
- Assessing the traffic impacts caused by new development.
- Congestion on Route 99 and parallel streets.
- Congestion on California Avenue between Stockdale Highway and Oak Street, on Rosedale Highway near Route 99, and on Ming Avenue near Route 99.
- Deficient right-of-way widths on many arterials and collectors.
- Methods to secure funding for the circulation system, including high-speed facilities.
- Difference between city and county street standards.
- Lack of signal synchronization along arterials.
- A proliferation of driveways and traffic signals on arterials.
- Through traffic in residential neighborhoods.
- Unattractive streets which lack adequate landscaping.



### OVERVIEW OF CIRCULATION PLAN

A circulation plan has been devised to avoid the congestion that would result from buildout of the 2010 land use plan. The necessary improvements are shown in Figure III-5. Upgrades and extensions are planned for the freeway and arterial street systems as described below. Beyond the 2010 planning horizon, Figure III-6 shows the ultimate street system for the planning area. Right-of-way should be reserved for the ultimate freeway system, as necessary based on the priorities discussed below.

#### FREEWAYS

Three new freeways are planned - the Crosstown Freeway, the Westside Freeway, and the North-South Freeway. The Crosstown Freeway extends from Route 178 near Baker Street, around the south side of downtown Bakersfield, to Route 99. This freeway was recommended by the Route 178 Corridor Study, prepared jointly by Kern COG, the City of Bakersfield, and Caltrans. The Westside Freeway is a continuation of the Crosstown Freeway across Route 99 and the Kern River and parallels the Kern River on the north side. The freeway would temporarily connect into Stockdale Highway west of Renfro Road. The alignment of the Westside Freeway is analyzed in a corridor study sponsored by Kern COG and Caltrans. The Crosstown and Westside freeways would provide necessary capacity for east-west travel and relieve congestion on Route 178, Rosedale Highway, California Avenue, and other existing east-west routes. Within the 2010 planning horizon development in the planning area would not necessitate actual construction of the freeway west of Renfro. The North-South Freeway would link Route 99 with Interstate 5, passing through the western portion of the planning area. Several alignments for the north-south freeway alternatives are being considered at the time of 2010 document preparation. This freeway would provide a bypass to Route 99, which would otherwise be overburdened, and would provide an important link across the Kern River from southwest Bakersfield to the Westside Freeway. The crosstown/westside link and the north-south freeway described above will be necessary to support the 2010 land use element.

Future freeway corridors are also shown in conceptual form on Figure III-5. These are general areas where freeways will be needed in the future but need not be constructed by 2010. The corridors are important to show as an aid to right-of-way preservation. If permanent structures could be avoided in these corridors, future freeway construction would be simpler and less expensive. One corridor extends from Route 178, around southeast Bakersfield, and west to Interstate 5 just south of Panama Lane. This corridor represents the completion of a freeway ring around Bakersfield, which would aid local circulation, and provides a bypass of Route 58 through the city for regional and interstate trips. The second corridor extends west to Interstate 5 from the terminus of the Westside Freeway at Allen Road. This corridor would complete a Route 178 freeway link to Interstate 5 for local and regional traffic. The third corridor is the short segment of Route 204 from Route 58 to "F" Street that presently exists as an arterial street. With continued development of the Central Valley north of Bakersfield this segment will eventually need to be upgraded to a freeway.





**FREEWAYS**

FUTURE FREEWAY

EXISTING-TO BE WIDENED

**ARTERIALS**

NEW

EXISTING-TO BE WIDENED

**COLLECTORS**

NEW

EXISTING-TO BE WIDENED

NUMBER OF LANES

NEW OR IMPROVED INTERCHANGE

**2010 CIRCULATION IMPROVEMENTS**

METROPOLITAN BAKERSFIELD

**2010 GENERAL PLAN**

• CITY OF BAKERSFIELD

• COUNTY OF KERN

• KERN COUNCIL OF GOVTS.

• GOLDEN EMPIRE TRANSIT

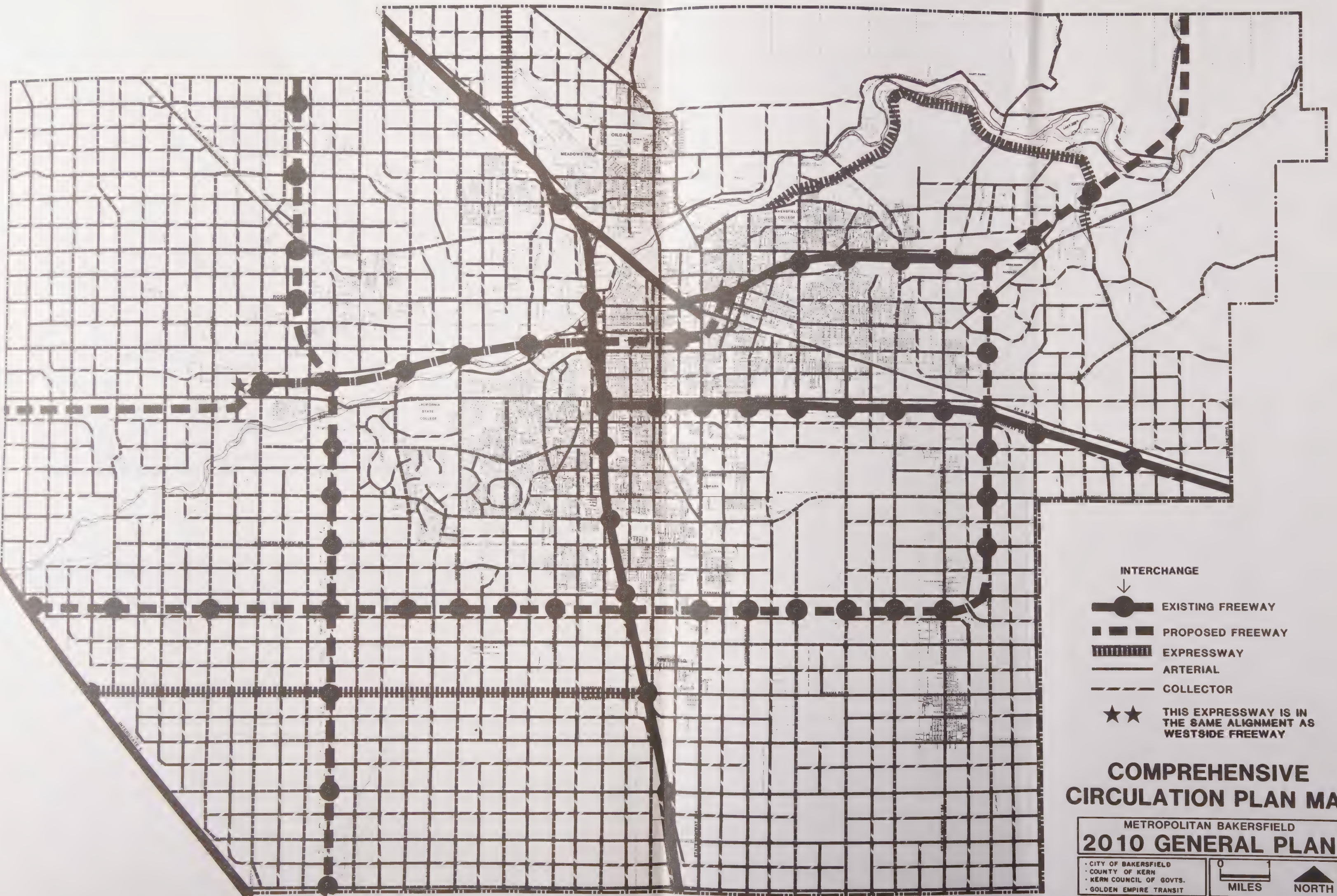
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MILES

NORTH







**INTERCHANGE**

↓

**EXISTING FREEWAY**

**PROPOSED FREEWAY**

**EXPRESSWAY**

**ARTERIAL**

**COLLECTOR**

★★ **THIS EXPRESSWAY IS IN THE SAME ALIGNMENT AS WESTSIDE FREEWAY**

**COMPREHENSIVE CIRCULATION PLAN MAP**

**METROPOLITAN BAKERSFIELD**

**2010 GENERAL PLAN**

• CITY OF BAKERSFIELD  
• COUNTY OF KERN  
• KERN COUNCIL OF GOVTS.  
• GOLDEN EMPIRE TRANSIT

0  
MILES

**NORTH**





Upgrading existing freeways will also be necessary. These include the widening of Route 178 from Fairfax Road to Alfred Harrell Highway, widening of Highway 99 between Panama Lane and Rosedale Highway, and widening Highway 58 between Highway 99 and Cottonwood Road. These improvements would eliminate areas of spot congestion.

#### ARTERIALS

Several new arterials and arterial extensions are planned. Generally, the plan calls for widening of existing substandard arterials to the full 110 feet where possible with six travel lanes (four in unincorporated areas) and the extension of the arterial system into the new growth areas. In some areas the newly-extended arterials would not need to have all four or six travel lanes constructed. The full right-of-way width should be reserved, however, to allow for future expansion. New arterial crossings of the Kern River are called for at Allen Road, Oak Street, Old River Road, Mohawk Road, and Fairfax Road (to China Grade Loop). Arterials are generally spaced at one-mile intervals throughout the developed area except where topography or other unique features warrant a different pattern.

#### COLLECTORS

In accordance with existing street patterns in Bakersfield the plan calls for collector streets (four travel lanes in 90 feet of right-of-way) in a grid pattern on mid-section lines. This pattern is deviated from where physical constraints are present, where collectors are not needed, or where existing development precludes the grid pattern of collector streets.

The objective of the planned street system is to accommodate planned land development without traffic congestion. All new streets and freeways are projected to operate at Level of Service C or better. On streets where the existing level of service is below "C", special consideration to identify mitigation measures to prevent and/or delay degradation of the existing level of service would be required.

GOALS AND POLICIES:

The following presents the goals and policies for streets in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Provide a safe and efficient street system that links all parts of the area for movement of people and goods.
- 2 Provide for safe and efficient motorized, non-motorized, and pedestrian traffic movement.
- 3 Minimize the impact of truck traffic on circulation, and on noise sensitive land uses.
- 4 Provide a street system that creates a positive image of Bakersfield and contributes to residents' quality of life.
- 5 Provide a system of freeways which maintains adequate travel times in and around the metropolitan area.
- 6 Provide a local street network that contributes to the quality and safety of residential neighborhoods and commercial districts.
- 7 Develop and maintain a circulation system that supports the land use plan shown in the general plan.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions. For ease of implementation, policies have been arranged with respect to circulation topics they influence. Those which cannot be categorized by specific topic have been placed in a "General" category.

## DESIGN

- 1 Classify streets in the following manner (I-1):

freeways provide service to through traffic exclusively with no access to abutting property and no at-grade intersections.

expressways are arterial highways with at least partial control of access which may or may not be divided or have grade separations at intersections and may be an interim facility for an ultimate freeway.

arterials are used primarily by through traffic, with a minimal function to provide access to abutting property.

collectors function to connect local streets with arterials and to provide access to abutting property.

locals are exclusively for property access and through traffic is discouraged.



## 2 Establish the following standards for the street system (I-2):

<u>Facility Type</u>	<u>Lanes</u>	<u>Right-of-Way Width</u>	<u>Pavement Width</u>	<u>Curb Parking</u>
Freeway/ Expressway	210' minimum *			No
Arterial w/ bike lanes	6	110'	96'	No
** Arterial w/ bike lanes	4	110'	96'	Yes
Arterial w/o bike lanes	6	110'	90'	No
** Arterial w/o bike lanes	4	110'	90'	Yes
Collector w/ bike lane w/ 2-way left turn	4	90'	74'	No
Collector w/ bike lane	4	90'	74'	Yes
Collector w/o bike lane w/ 2-way left turn	4	90'	68'	No
Collector w/o bike lane	4	90'	68'	Yes
LOCAL STREET Commercial/Industrial	2	60'	44'	***
Residential Collector	2	60'	44'	Yes
Residential	2	60'	40'	Yes

---

\* Precise geometrics will be established through specific engineering studies.

\*\* In incorporated areas, no parking is allowed along arterials within new development. In unincorporated areas, no parking zones will be determined by the traffic engineer.

\*\*\* No parking zones will be determined by the traffic engineer.

- 3 Provide additional right-of-way and pavement width to accommodate turn lanes at intersections (I-2).
- 4 Provide additional right-of-way and pavement width at other locations for turn lanes, bus lanes, etc., as needed, based on engineering study (I-3).
- 5 Place traffic signals to minimize vehicular delay (I-6).
- 6 Design and locate site access driveways to minimize traffic disruption where possible considering items such as topography, past parcelization and other factors (I-7).
- 7 Minimize direct and uncontrolled property access from arterials (I-8).
- 8 Limit median breaks on arterials to a maximum of three per mile and include left-turn lanes at each (I-10, I-11).
- 9 Consider the construction of grade separations for intersections unable to meet minimum level of service standards (I-11).
- 10 Design local streets to conform to topography. Allow for deviation from "grid" system on local streets when they do not interfere with other traffic policies and traffic flows (I-34).
- 11 Design local collector street systems to minimize through traffic movements and include short block lengths to discourage excessive speeds (I-34).

## IMAGE

- 12 Maintain the integrity of the circulation system (I-12).
- 13 Designate and sign specific streets as official truck routes, within incorporated areas (I-13).
- 14 Provide continuous truck routes within incorporated areas that provide access to designated industrial areas (I-13).
- 15 Prohibit trucks from non-truck routes within incorporated areas except as necessary for direct property access for pick-up and delivery (I-13).
- 16 Require that truck access to commercial and industrial properties be designed to minimize impacts on adjacent residential parcels (I-14).
- 17 Require buildings expected to be serviced by delivery trucks to provide off-street facilities for access and parking (I-14).

- 18 Provide and maintain landscaping on both sides and in the median of arterial streets within incorporated areas. In unincorporated areas, landscaping within road right-of-way may be allowed and shall be limited to low shrubs; blank irrigation conduit only will be provided within the median of arterial streets (I-15).
- 19 Provide and maintain landscaping on both sides of collector streets. In unincorporated areas, landscaping within road right-of-way may be allowed and shall be limited to low shrubs (I-16).
- 20 Prohibit parking on new arterials, in incorporated areas. In unincorporated areas, prohibit parking when traffic studies warrant elimination. Allow parking on collectors and on residential streets (I-17).
- 21 Route traffic around, rather than through, pedestrian-oriented areas (I-18).
- 22 Design transportation improvements to minimize noise impacts on adjacent uses (I-19).

#### FREEWAYS

- 23 Provide freeways in a manner similar to that shown on the Circulation Plan Map. Actual alignments to be determined by specific corridor studies (I-20).
- 24 Identify route alignments and right-of-way needs (I-21).
- 25 Identify interchange locations and preliminary designs (I-5, I-21).
- 26 Preserve freeway and interchange rights-of-way consistent with corridor study alignments and specifications (I-22).
- 27 Work with Caltrans to have the freeways constructed (I-23).
- 28 If no specific line has been adopted, future road reservations or other accommodations may be required to preserve freeway/expressway alignments as shown on the circulation map (I-21, I-22). (CC 5/22/91)
- 29 Upon the adoption of a specific plan line for a freeway/expressway alignment, developers will be required to make reservations preserving the alignment of any subdivision map. In addition, development restrictions on general plan amendments, zone changes and the issuance of building permits will also be required (I-24). (CC 5/22/91)
- 30 The need for a north/south freeway/expressway and an east-west freeway (178) are conceptually shown on the circulation map. Alternative alignments are under study and upon completion of corridor studies the actual alignment will be adopted and dedications or reservations of right-of-way may be required (I-22, I-24).

## GENERAL

- 31 Where existing street right-of-way is greater than necessary for desired purposes, dispose of surplus right-of-way in a manner consistent with state and local laws (I-4).
- 32 Reserve or acquire right-of-way for all future transportation facilities in conformance with the Circulation Plan Map (I-24).
- 33 Provide new transportation facilities as needed based on existing usage and future demand (I-25, I-26, I-27).
- 34 Minimize the impacts of development on the circulation system. Review all development plans, rezoning applications, and proposed general plan amendments with respect to their impact on the transportation system, and require revisions as necessary (I-26).
- 35 Require new development and expansion of existing development in incorporated areas to fully provide for on-site transportation facilities including streets, curbs, traffic control devices, etc. Within unincorporated areas street improvements will be determined by County Ordinance (I-27, I-29).
- 36 Prevent streets and intersections from degrading below Level of Service "C" where possible due to physical constraints (as defined in a Level of Service ordinance) or when the existing Level of Service is below "C" prevent where possible further degradation due to new development or expansion of existing development with a three part mitigation program: adjacent right-of-way dedication, access improvements and/or an area-wide impact fee. The area-wide impact fee would be used where the physical changes for mitigation are not possible due to existing development and/or the mitigation measure is part of a larger project, such as freeways, which will be built at a later date (I-28, I-29).
- 37 Require new development and expansion of existing development to pay for necessary access improvements, such as street extensions, widenings, turn lanes, signals, etc., as identified in the transportation impact report as may be required for a project (I-30, I-31, I-32).
- 38 Exempt the downtown Bakersfield redevelopment area and small infill projects from the Level of Service Ordinance to facilitate infill projects and downtown redevelopment and in recognition of the higher traffic levels inherent to a vital central core (I-31).
- 39 Require new development and expansion of existing development to pay or participate in its pro rata share of the costs of expansions in area-wide transportation facilities and services which it necessitates (I-32, I-33).



- 40      Provide new local street systems that are logical and comprehensible and systems of street names and addresses that are simple, consistent, and understandable (I-34, I-35).
- 41      Plan alignments for local streets to permit economical and practical patterns, shapes, and sizes of development parcels (I-34).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Circulation Element affecting streets. This listing is not to limit the scope of implementation of this plan. Federal, state and area wide agencies will also be involved. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Adopt appropriate ordinances establishing a street classification system for the city and county in conformance with the Circulation Element.
- 2 Where necessary revise city and county street standards as necessary to conform with standards set forth under the Circulation Element. Endorse, adopt or incorporate as appropriate standards from special studies, such as the westside corridor study for design of freeways, highways and expressways.
- 3 Evaluate need for additional right-of-way at certain locations at time of establishment of plan lines and/or street design through an engineering study. Consult with local transit authority to determine need for bus lanes.
- 4 Evaluate and respond to requests for removal of public streets in conjunction with development proposals.
- 5 Adopt current Caltrans manuals as the basic standard for engineering design.
- 6 Consider interconnection and progressive timing when installing new signals. Periodically examine operation of existing signals for possible improvement.
- 7 Adopt drive approach design standards. Review all site plans for compliance.
- 8 Review site plans, rezonings, and subdivision requests, with respect to access from arterials. Consider conditions of approval to minimize uncontrolled property access.
- 9 Amend city and county subdivision ordinances to control access on arterials.
- 10 Adopt a standard for median breaks and apply during the development review process.
- 11 Monitor traffic volumes and establish specific plan lines and preliminary designs as need becomes apparent. Establish design standards for median breaks on major arterial streets and work with Separation of Grade District to establish list of grade separation projects.

- 12 Establish a pavement monitoring system in the planning area for preventive maintenance, resurfacing, and reconstruction.
- 13 Revise the city's existing truck route ordinance.
- 14 Amend the city and county zoning ordinances as needed to regulate truck access on properties adjacent to residential areas.
- 15 Amend city and county zoning ordinances as needed to require new development to landscape and maintain arterial street frontage. Within incorporated areas program median landscaping in Capital Improvement Program and maintenance in annual City Community Services Department budget. Establish minimum landscaping standards.
- 16 Amend city and county zoning ordinances as needed to require new development to landscape and maintain street frontages. Establish minimum landscaping standards.
- 17 Revise city and county street standards to conform with parking requirements set forth in the Circulation Element. Remove parking from existing arterials, and major collectors when traffic studies indicate removal is warranted to improve safety or increase capacity.
- 18 Consider pedestrian sensitive areas when planning circulation systems.
- 19 Assess potential noise impacts in street design, and to the extent feasible, route streets to minimize impacts.
- 20 Construct designated freeways as warranted by travel demand. Seek alternative funding sources, in addition to traditional funding methods.
- 21 Participate in city and county route alignment, travel demand studies, and interchange studies in conjunction with Caltrans and Kern COG.
- 22 Establish specific plan lines for all freeway alignments and keep the rights-of-way clear of structures. Work with Caltrans to have the routes officially adopted.
- 23 Seek and utilize funding for freeway right-of-way acquisition and construction. Work with developers and land owners for right-of-way acquisition dedication.
- 24 Delineate and adopt specific plan lines for all streets shown on the Circulation Plan Map as need becomes apparent. (CC 5/22/91)
- 25 Maintain records of existing traffic volume and cumulative projections of traffic from new development to schedule projects for the Capital Improvement Program.

- 26 Establish guidelines for project design review based on traffic engineering standards (e.g., driveway design, on-site circulation) and the Level of Service Ordinance (see below).
- 27 Amend the city subdivision ordinance to require development to provide all on-site transportation facilities. In unincorporated areas, improvements for all streets will be determined by county ordinance.
- 28 Develop and adopt a Level of Service Ordinance for the city and county to include a definition of Level of Service "C", procedures for how it is measured, and mitigation measures to keep from exceeding the standard.
- 29 Develop guidelines for preparation of transportation impact reports, definition of undesirable impacts, and identification of mitigation procedures and include these in the proposed Level of Service Ordinance.
- 30 Incorporate requirements for access improvements in the proposed Level of Service Ordinance.
- 31 Establish a minimum size standard for projects to come under the Level of Service Ordinance and include that in the Ordinance. Also, establish the downtown redevelopment project area boundaries for certain exemptions in the ordinance.
- 32 Amend city and county subdivision ordinances as needed to include requirements for development to pay for or do street widenings. In cases where fees are paid but widening is not yet necessary, the fees should be held in a separate account dedicated to future widening of the specific street in question. In those cases developer may be allowed to construct facilities in lieu of paying fees.
- 33 Develop and adopt measures such as a Transportation Impact Fee Ordinance for the city and county specifying the area wide impact fee schedule and how the fees will be used.
- 34 Amend city and county subdivision ordinances to incorporate standards for comprehensible street systems and street names.
- 35 Review and improve the planning area's house numbering system.



## B. TRANSIT

### OVERVIEW OF EXISTING CONDITIONS

Public transportation in Bakersfield includes local buses, intercity buses, AMTRAK, and paratransit service. For the purpose of the general plan, the rail freight system is also included in this category.

The largest system is GET (Golden Empire Transit), which is the local bus operator. GET operates fourteen routes throughout the metro area and carries 9,000 passengers per day. This amounts to one percent of total travel in the area.

Intercity bus operators include Greyhound, Trailways, Orange Belt Stages, Foster's Transit, Airport Bus of Bakersfield, and Kern County. Kern County provides service between Bakersfield and rural communities, such as Lamont and the Kern River Valley, while the private carriers serve other major cities. AMTRAK provides rail service to and from Bakersfield and the Central Valley cities to the north. The AMTRAK station is located at 16th and F Streets. Paratransit providers include the taxi system and various social service agencies providing specialized transportation to their clients.

Two railroads provide freight service to Bakersfield: Santa Fe and Southern Pacific. The Santa Fe yard is located downtown between Truxtun and California Avenues, and the Southern Pacific yard is located in East Bakersfield between Kentucky and Sumner Streets.

### TRANSIT ISSUES

The transit issues relevant to the general Plan are as follows:

- Buses are being run on local residential streets.
- Buses find it difficult to serve the new closed-block design subdivisions.
- New development are lacking in design to accommodate bus stops.
- The city would like to have an intermodal transportation terminal downtown.
- The Santa Fe rail yard would provide an excellent opportunity for development if it were to relocate.

GOALS AND POLICIES

The following presents the goals and policies for transit in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Provide planning area residents with a choice of travel modes.
- 2 Provide a street system and land development policies that support public transportation.
- 3 Provide cost effective public transportation services.
- 4 Reduce traffic congestion and parking requirements and improve air quality through improved transportation services.
- 5 Enhance rail service capacities and usage in the planning area.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Consider transit service issues in the design of the arterial and collector street system (I-1).
- 2 Consider for bus turnouts along arterials and collectors where appropriate (I-1).
- 3 Consider transit service issues in the site plan review process (I-2).
- 4 Coordinate with GET to locate bus stops as close as possible to the facilities they serve (I-3).
- 5 Work with GET to provide scheduled public transit to serve metro area residents (I-4).
- 6 Work with the Consolidated Transportation Service Agency (CTSA) to provide social services transportation to metro area residents (I-5).
- 7 Encourage the development of a multi-modal public transportation terminal (I-6).
- 8 Encourage businesses and government to use flexible or staggered work hours so that travel demand is spread more evenly throughout the day (I-7).
- 9 Support efforts to promote ridesharing (I-8).
- 10 Work with AMTRAK to maintain and improve rail passenger service and facilities in Bakersfield (I-9).
- 11 Encourage the relocation of the Santa Fe switching yard to a location outside downtown Bakersfield (I-10).
- 12 Work to provide grade separations at all arterial/railroad crossings (I-11).
- 13 Support efforts to develop high-speed rail facilities to service the plan area (I-12).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Circulation Element affecting transit. This listing is not to limit the scope of implementation of this plan. State law required that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Include GET in the design of new arterial and collector streets and in the review of subdivision plans.
- 2 Include GET in site plan review for all projects above a size threshold to be determined in consultation with GET staff.
- 3 Require bus stops as conditions of development in compliance with and based upon metro-adopted state-mandated public transit master plans.
- 4 Participate (city and county) in GET route and schedule planning activities.
- 5 Participate (city and county) with the Consolidated Transportation Services Agency in schedule planning activities.
- 6 Adopt the conclusions and provisions of the intermodal terminal study, and encourage prompt development of the terminal.
- 7 Coordinate (city and county) with Kern COG in publicizing the merits of flexible work hours.
- 8 Work with Kern COG to establish and maintain park-and-ride lots and to publicize the ridesharing matching service.
- 9 Participate with Kern COG (city and county) in AMTRAK service and delivery planning.
- 10 Local agencies should cooperate in a study of switching yard needs and locate a suitable alternative site. Communicate with Santa Fe officials.
- 11 Continue to work with the Railroad Grade Separation District to establish priority locations and to build the necessary facilities.
- 12 Local agencies should cooperate in studies to pursue the establishment of high-speed rail service for the plan area, including potential routes and terminal locations.



## C. BIKEWAYS

### OVERVIEW OF EXISTING CONDITIONS

Bicycling accounts for a small proportion of total miles traveled in Bakersfield (less than 2 percent). Nevertheless, the relatively flat terrain and fair weather are conducive to bicycling for transportation to work, recreation, and school. It is estimated that one-third the population utilizes bicycling in one form or another.

Kern County developed and adopted a bikeways plan in the mid 1970's following the energy crisis. The plan called for bike lanes on various streets and exclusive bike paths on canals, along railroad rights-of-way, and along the Kern River. In 1984, Kern COG sponsored a bikeway study for the metro area that called for more on-street bike lanes and fewer paths along canals and railroad rights-of-way. The bike path along the Kern River was retained as a major component of the plan.

Part of the planned bikeway system has been implemented. The bike path along the river is constructed between Manor Street and Cal State Bakersfield, and bike lanes exist along Stockdale Highway to Cal State Bakersfield and along part of Coffee Road, Calloway Drive and Snow Road from Norris School to Fruitvale Avenue.

### BIKEWAY ISSUES

The following issues have been identified:

- Encouragement to use bicycles necessitates the provision of bike lanes and bike paths.
- The existing county bikeways plan is outdated in many locations.
- Neither the city nor the county has street standards that accommodate bike lanes.
- No mechanism exists to implement the bikeways plan.

GOALS AND POLICIES

The following presents the goals and policies for bikeways in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

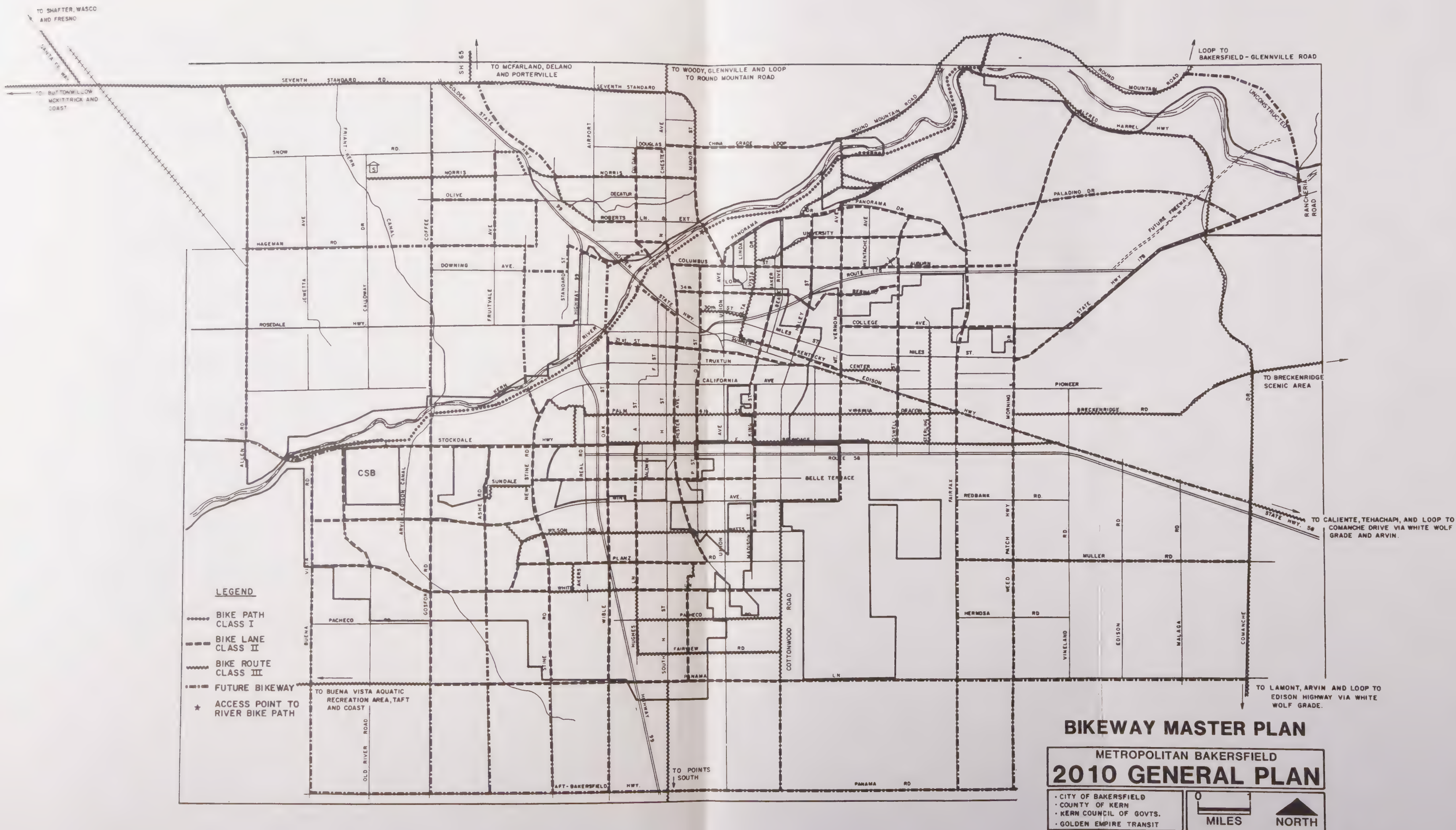
- 1      Provide a circulation system which recognizes and responds to the needs of bicycle travel.
- 2      Provide a circulation system that minimizes cyclist/motorist conflicts.
- 3      Provide a continuous easily-accessible bikeway system within the metro area.
- 4      Provide mechanisms to ensure the prompt implementation of the bikeway system.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1      Require bicycle facilities to be designed in accordance with the State Bikeway Design Criteria (I-1).
- 2      Adopt street standards that accommodate bicycle lanes where indicated on the Bikeway Master Plan (I-2)
- 3      Design bridges, over passes, under passes, etc. to be compatible with bicycle travel (I-3).
- 4      Maintain bicycle facilities so they do not become hazardous (I-4).
- 5      Consider bicycle safety when implementing improvements for automobile traffic operations (I-3).
- 6      Coordinate the Metro Bakersfield Bikeway Master Plan with the regional bicycle system (I-5).
- 7      Provide bicycle parking facilities at major activity centers such as shopping centers, employment sites, and public buildings (I-6).
- 8      Provide an information/education program to encourage use of the system and to promote safe riding (I-7).
- 9      Require new subdivisions to provide bike lanes on collector and arterial streets in accordance with the Bikeway Master Plan (Figure III-7), (I-2).
- 10     Encourage new subdivisions to provide internal bike paths where feasible and where natural features make bike paths desirable (I-2).
- 11     Construct bike lanes in conjunction with all street improvement projects that coincide with the Bikeway Master Plan (I-3, I-10).
- 12     Where feasible, stripe and sign existing streets to include bike lanes as shown on the Bikeway Master Plan (I-8).
- 13     Give priority to bikeway construction that will link existing sections of the system (I-9).









IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Circulation Element affecting bikeways. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1        Incorporate State Bikeway Design Criteria into the packet of public works design specification sheets.
- 2        Revise city and county subdivision ordinances as necessary to incorporate bicycle lane requirements.
- 3        Review all street design plans, including those of Caltrans and the Greater Bakersfield Separation of Grade District, for compatibility with bicycle travel.
- 4        Include bicycle lanes and public paths on public property in the street maintenance program. Require publicly used bike paths on private property be maintained by a special maintenance district or other entity.
- 5        Incorporate the policies of the Regional Bicycle Plan into the Metro Bakersfield Bikeway Master Plan.
- 6        Revise city and county zoning ordinances to address bicycle parking facilities as needed.
- 7        Upon substantial completion of the bikeway system, produce and distribute to the public a descriptive pamphlet. Ensure that safe riding techniques are taught in the elementary schools.
- 8        Include bike lane striping in the city's and county's annual Capital Improvement Program.
- 9        Prioritize bikeway linkages when including bikeway projects in the Capital Improvement Program.
- 10       Seek alternative methods of funding.

## D. PARKING

### OVERVIEW OF EXISTING CONDITIONS

The city and county both wish to accommodate parking off-street. This is done through the zoning ordinances which specify the number of off-street parking spaces that must be provided by new development. Different types of development must provide different numbers of spaces based on their expected parking demand. The goal of the ordinances is to ensure that all cars can be accommodated in off-street parking areas or facilities.

Downtown Bakersfield is the one area that departs from the pattern of specific parking lots associated with each development. Many buildings in the downtown area rely on off-site parking. The city owns and operates several parking lots and one parking structure serving downtown businesses. Private parking structures and lots also exist in the downtown. Due to the existence of the city lots and the greater incidence of walking trips, downtown parking requirements in the zoning ordinance are reduced by 30% to 50%.

### PARKING ISSUES

The following parking issues have been identified:

- The parking requirements need to be revised. Some land uses provide too few spaces, and others provide too many. Too few spaces results in vehicles parking on the street, and too many spaces is an inefficient use of land.
- The city and county parking requirements are often not in agreement.
- The city has not resolved how to accommodate downtown parking needs.

GOALS AND POLICIES

The following presents the goals and policies for parking in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Provide an efficient parking system to respond to the needs of motorists.
- 2 Satisfy parking requirements in all new developments (residential, commercial, industrial, etc.) through off-street facilities.
- 3 Preserve and enhance residential neighborhoods through parking policy.



## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Establish minimum parking requirements based on parking demand (I-1).
- 2 Establish stall and aisle widths that are convenient and efficient (I-2).
- 3 Ensure that adequate on-site parking supply and parking lot circulation is provided on all site plans in accordance with the adopted parking standards (I-3).
- 4 Discourage the intrusion of non-neighborhood parking in residential areas (I-4).
- 5 Remove abandoned vehicles promptly from city streets (I-5).
- 6 Regulate parking of vehicle, boats, trailers, etc. on city streets (I-6).
- 7 Identify off-site parking needs in activity centers and outline procedures to finance and provide the facilities (I-7).
- 8 Give top priority to satisfying short-term parking needs, i.e., less than or equal to three hours, and second priority to long-term parking needs (I-8).
- 9 Locate short-term parking to be convenient to the businesses served (I-8).
- 10 Locate long-term parking on peripheral lands, accessible to arterial streets (I-8).
- 11 Discourage parking between the sidewalk and buildings in pedestrian sensitive areas (I-9).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Circulation Element affecting parking. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Research parking demand rates and establish a schedule of requirements in the city and county zoning ordinances such that too little or too much parking is avoided. Periodically update the requirements.
- 2 Research vehicle sizes and mix to establish parking layout and dimension standards to be incorporated into city and county zoning ordinances and periodically update.
- 3 Review all site plans for conformance with adopted parking standards.
- 4 Monitor citizen complaints regarding parking; conduct studies as needed, and institute control measures if necessary.
- 5 Tag vehicles parked longer than permitted and contract with towing companies to remove them under the provisions of local statutes.
- 6 Develop and adopt a parking ordinance as needed for the planning area specifying where curb parking is allowed and disallowed and defining the vehicles, etc. to which the ordinance applies.
- 7 Develop area-specific parking plans for general plan designated activity centers.
- 8 Incorporate general plan policies related to parking into parking standards.
- 9 Amend the city and county zoning ordinances to address parking in pedestrian sensitive areas as needed, and incorporate into parking plans for such areas.

## E. AIRPORTS

### OVERVIEW OF EXISTING CONDITIONS

Three airports lie within the metro area. Meadows Field, the largest and busiest, is a county facility serving passenger and cargo needs. It handles commercial airlines and general aviation. Meadows Field comprises 1,400 acres, with the passenger terminal located on Airport Drive north of Norris Road. Bakersfield Airpark is a general aviation airport owned by the City of Bakersfield. It is located on Union Avenue north of Planz Road and comprises 93 acres. Rio Bravo airport is located on State Highway 178 east of Comanche Drive. It is a privately-owned general aviation airport comprising 210 acres.

All three airports have master plans prepared which call for runway expansion and improvements. In addition, Meadows Field plans to construct a new passenger terminal northwest of its existing location. The three airports will retain their current functions. Bakersfield Airpark and Rio Bravo will be general aviation airports, and Meadows Field will be the commercial air carrier airport for Kern County.

### AIRPORT ISSUES

The following airport issues have been identified:

- Land use types that are incompatible with airport noise are presently located within the impact zones at Meadows Field and Bakersfield Airpark.
- Meadows Field needs good regional access via freeways and arterials.

GOALS AND POLICIES

The following presents the goals and policies for airports in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1        Ensure air passenger and general aviation facilities and services are available to meet citizens' needs.
- 2        Develop, operate, and maintain Meadows Field and Bakersfield Airpark to meet aviation needs in the metro area and to support general aviation at Rio Bravo airfield.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1        Maintain master plans for Meadows Field and Bakersfield Airpark (I-1).
- 2        Ensure compatibility between the general plan, airport master plans and airport land use plans (I-2, I-5).
- 3        Coordinate the development and operations at each airport with other airports to ensure compatibility and maximum public benefit (I-3).
- 4        Provide ground transportation access to and from the airports (I-4).
- 5        Allow for the establishment of private airports and heliports/helipads (I-4).
- 6        Encourage and provide for the orderly development of public use airports within the planning area and prevent the creation of new noise and safety impacts (I-2, I-3, I-4, I-5).



IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Circulation Element affecting airports. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Each airport should prepare and periodically update a plan discussing future expansion, improvements, and operations.
- 2 Review airport master plans for conformance with the Airport Land Use Plan, General Plan, and amend as necessary to make them compatible. Amend Zoning Ordinances as necessary to implement approach/departure zoning.
- 3 Participate in the regional airport planning activities of Kern COG and revise individual airport master plans as necessary to produce a coordinated system.
- 4 Require Conditional Use Permits as necessary for the establishment of new airports, heliports and helipads.
- 5 Consider the use of avigation easements for discretionary projects to provide for orderly development and as a means of preventing new noise and safety impacts.

## F. PEDESTRIAN WAYS

### OVERVIEW OF EXISTING CONDITIONS

Walking trips are more important than many people realize. Walking trips account for 80 percent of total travel in the metro area, and walking is the primary transportation mode for many people, especially children. Several locations in the metro area have high levels of pedestrian activity including downtown Bakersfield and schools.

The primary components of the pedestrian circulation system are sidewalks and crosswalks. Both the city and county require installation of sidewalks in conjunction with new development. Sections of the metro area built before this requirement, however, lack sidewalks. In these older neighborhood, pedestrians must walk in the street. Similarly, many areas lack wheelchair ramps because they were built prior to that requirement.

### PEDESTRIAN WAY ISSUES

The following pedestrian issues have been identified:

- Sidewalks and wheelchair ramps are needed in areas where they are lacking.
- Some streets are too wide for pedestrians to comfortably cross.
- Some high-volume pedestrian areas, such as downtown Bakersfield, may need additional pedestrian facilities - wider sidewalks or signalized crosswalks.

GOALS AND POLICIES

The following presents the goals and policies for pedestrian in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Encourage pedestrian travel as a viable mode of movement throughout the planning area.
- 2 Provide adequate sidewalks throughout the planning area.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Provide sidewalks along streets where pedestrian use warrants (I-1).
- 2 Facilitate the provision of sidewalks on streets where they are lacking (I-2, I-6).
- 3 Encourage new subdivisions to provide internal pedestrian paths where feasible and where natural features make paths desirable (I-3).
- 4 Provide for the physically handicapped in the design of all pedestrian facilities (I-4).
- 5 Encourage development of pedestrian sensitive uses and design characteristics in the following areas (I-5, I-6):
  - a. Downtown
  - b. Baker Street
  - c. Southwest Center
  - d. Northwest Center
  - e. Northeast Center

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Circulation Element affecting pedestrian ways. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1        Develop and adopt sidewalk design standards including widths, setbacks, and paving materials to be incorporated into the appropriate ordinances and public works engineering standards.
- 2        Respond to resident requests for sidewalks; conduct studies as needed, and ensure prompt implementation through city and county public works. Consider provision of sidewalks in conjunction with street reconstruction projects.
- 3        Amend city and county subdivision ordinances to incorporate standards for internal pedestrian paths.
- 4        Incorporate standards for handicapped ramps in sidewalk designs and in other pedestrian facilities into public works engineering standards.
- 5        Review development plans with respect to considerations for pedestrian sensitivity consistent with policies and standards set forth under the Land Use Element.
- 6        Seek and implement alternative methods of funding.



## G. CANALS, PIPELINES, POWER TRANSMISSION FACILITIES

### OVERVIEW OF EXISTING CONDITIONS

Canals transport water; pipelines transport gas and oil, and power transmission facilities transport electric energy. Each of these transportation facilities is controlled by a separate agency. There are several canals and several agencies controlling one or more of them: the Kern Delta Water District, the North Kern Water Storage District, the Arvin-Edison Water Storage District the Kern County Water Agency, the Bureau of Reclamation, and the City of Bakersfield. Within the City of Bakersfield the canals are fenced to prevent public access, according to city policy. Outside the city, most canals are unfenced.

The power transmission lines are operated by P.G.&E. and Southern California Edison. The gas pipelines are operated by P.G.&E., Southern California Gas, and some private oil companies.

### CANAL, PIPE AND POWER TRANSMISSION ISSUES

The importance of canals and utility rights-of-way to the General Plan is their potential use as linear parks and trails. The issues are as follows:

- Many canal banks are wide enough for trails but they are not yet available for public use.
- Canals could be used more effectively as aesthetic design features in development.
- Utility rights-of-way, which must be kept free of structures, have not been utilized for parks or trails.

GOALS AND POLICIES

The following presents the goals, objectives, and policies for canals, pipelines and power transmission facilities in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1      Utilization of the canals and power line rights-of-way for maximum public benefit.
- 2      Use power transmission line rights-of-way and canal banks to supplement the public parks and trails systems whenever possible, provided public safety is encouraged.

POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1      Emphasize the positive urban design opportunities presented by the canal (I-1, I-2).
- 2      Work with the canal districts to resolve problems preventing public use of canal banks (I-1).
- 3      Incorporate canals whenever possible in land use planning and building design (I-2).
- 4      Consider potential conflicts between public safety and the purposes of canals, pipelines and power transmission facilities (I-3).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Circulation Element affecting canals, pipelines and power transmission facilities. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1      Initiate meetings between canal district staff and city and county public works and planning staff to discuss use of canal banks and public safety issues.
- 2      Review discretionary projects with consideration for design opportunities provided by canals, towerline and pipeline open space.
- 3      Review discretionary projects for potential conflicts between public safety and the purposes of canals, pipelines and power transmission facilities. Require risk assessments where dangerous relationships may exist.







# **CHAPTER IV**

## **HOUSING ELEMENT**

### **(CHAPTER RESERVATION)**

City and County jurisdictions have adopted Housing Elements which will not be updated as part of the 2010 General Plan. Housing Elements will be updated in accordance with state deadlines and adopted as part of the 2010 Plan as appropriate.









# CHAPTER V – CONSERVATION ELEMENT

## STATUTORY REQUIREMENTS

State of California Planning and Zoning Law requires that a Conservation Element be prepared as part of a general plan as follows:

Government Code Section 65302(d): The general plan shall include: a conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources.

The Conservation Element of the 2010 General Plan addresses the study area Biological Resources, Mineral Resources, Soils and Agriculture, Water Resources and Air Quality. Discussion on water distribution and flood control appear within the Public Services and Facilities Element and Safety Element respectively.

## A. BIOLOGICAL RESOURCES

OVERVIEW OF EXISTING CONDITIONS

Originally, the Bakersfield metropolitan area was a region of broad arid plains, often with an extensive cover of saltbush. These plains surrounded the wet center of the valley that was the drainage basin for the Kern River. As late as the 1860s, Colonel Baker's field was the only fenced pasture between Fresno and Los Angeles. By this time, most of the valley's broad plains were owned by resident sheepmen, and grazing was severe, especially in times of drought. What effect this had on the flora of the region is a matter of some conjecture, however. The large herds of tule elk and San Joaquin antelope that roamed the valley before the coming of white men may have had much the same effect on plant cover in dry years as the sheep had.

Irrigation developed rapidly in the Bakersfield area in the late 1880's and large areas were converted to farmlands. Construction of Isabella Dam on the Kern River, together with groundwater pumping in the region, has severely lowered the water table and consequently, little surface water reaches the main valley area to support wetland habitats. However, the Kern River still supports areas of characteristic streambank vegetation. In the period since 1900, the oil and gas industry has developed rapidly in the Bakersfield area. As a result, the plant and animal communities that now exist within the region represent either highly modified (but still recognizable) remnants of native communities or areas that have been almost completely altered from their former state.

Due to the area's low and infrequent rainfall and generally little topographic relief, the predominant vegetation and associated fauna are well adapted to the arid climate. Grasslands and scrublands once covered virtually the entire area. These areas, seemingly poor in plant species diversity and wildlife abundance, are nonetheless the primary base for an intricate food chain which ultimately supports a great diversity of animal life from insects to small birds and mammals, to top predators such as hawks, falcons, harriers, coyote, and fox. Localized depressions where rainwater collects often harbor a great profusion of unusual and sometimes unique plant life. The presence of remnants of marshes, wetlands, riparian areas and man-created open water habitats further enhances the biological diversity of the area and provides for an abundance of waterfowl, fishes and aquatic organisms in an otherwise desert-like environment.

Despite the historic alteration and disruption to the biological environment by man, the area still retains significant plant and animal communities, some of which are considered sensitive by virtue of their uniqueness or rarity, others by virtue of their recent decline to the point which their existence may be threatened.

## BIOLOGICAL SENSITIVITIES

Certain plant and animal species, sometimes whole communities of these, may be considered to be "sensitive", according to guidelines established by the State and Federal Endangered Species Acts. A species is "sensitive" for reason(s) usually related to rarity, limited availability, unusual characteristics, prime conditions, and/or pending threats. In some instances, threats to these species and communities warrant official state or federal rare, threatened, endangered or protected status. For purposes of the 2010 Plan, "sensitive" species are considered rare, threatened or endangered plant or animal species that enjoy protected (i.e. listed) status from the State Department of Fish and Game or the United States Fish and Wildlife Service.

The Bakersfield metropolitan area could contain other potentially sensitive species of plants and animals which are not currently listed by the state or federal governments. These "species of concern" may need to be addressed by local agencies in the future. A complete listing of all plant or animal species known to be "sensitive" or "of concern" to the Bakersfield area is included in Appendix D.

### 1. Sensitive Plants

There are no plant species known from the Bakersfield area which have official state or federal rare, threatened or endangered status. However, a number of species have been proposed for such listing, including the Bakersfield Cactus (*Opuntia treleasei*). Because enough data is on file for this species to support federal listing in the near future, Bakersfield Cactus is considered sensitive and therefore is included in this plan.

Several species considered rare by the California Native Plant Society are known or potentially occur in the area. Table V-1 lists those species of concern, and Figure V-1 shows the approximate known locations of these plants.

### 2. Sensitive Animals

The Natural Diversity Data Base (from the California Department of Fish and Game) reports occurrences of four endangered and/or threatened vertebrate species in the Bakersfield region, including the blunt-nosed leopard lizard, the San Joaquin kit fox, the San Joaquin antelope squirrel, and the Tipton kangaroo rat. Areas of open space within the planning area which may be suitable habitat for these species are shown on Figure V-2. Table V-2 provides a comprehensive listing of animal species of concern known or potentially occurring in the Bakersfield area, while the following briefly discusses those of endangered or threatened (i.e. sensitive) status.



TABLE V-1

Plant Species of Concern Known to Occur or  
Potentially Occurring in the Bakersfield Area

### Plants

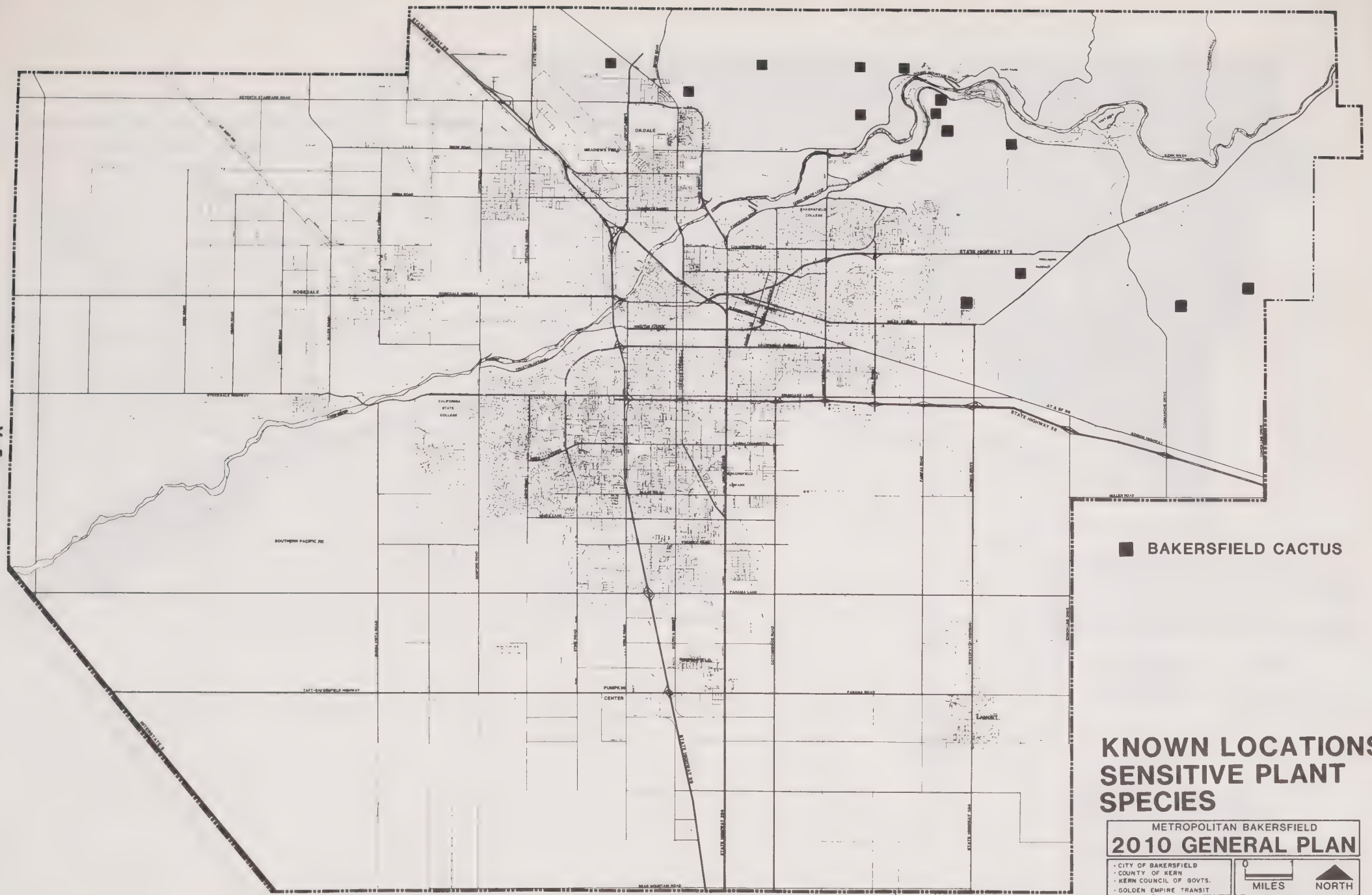
- Fritillaria striata (stiped adobe lily) - (1B C2\*)
- \*\* Eriogonum gossypinum (cottony buckwheat) - (4 C2)
- Atriplex tularensis (Bakersfield saltbush) - (1B C1)
- Delphinium gypsophilum g. (gypsum-loving larkspur) - (4)
- \*\* Opuntia treleasei (Bakersfield cactus) - 1B C1)
- Clarkia exilis (slender clarkia) - (4)
- \*\* Eriastrum hooveri (Hoover's eriastrum) - (1B C2)
- Trichostema ovatum (San Joaquin bluecurls) - (4)
- Mimulus pictus (calico monkeyflower) - (4 C3c)
- Nemacladus gracilis (slender nemacladus) - (4)
- Hemizonia pallida (Kern tarplant) - (4)
- Layia Leucopappa (Comanche Point layia) - (1B C2)
- Eatonella congdonii (San Joaquin Woolly-threads) - (1B)
- Pseudobahia peirsonii (Tulare pseudobahia) - (1B C2)
- Cirsium crassicaule (slough thistle) - (1B C2)
- Cordylanthus mollis hispidus (hispid bird's beak) - (1B C2)
- \*\* Caulanthus californicus (California jewelflower) - (1B C2)

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#### \* Status:

- 1B = (CNPS) Plants Rare or Endangered in California and Elsewhere
- 3 = (CNPS) Plants About Which More Information is Needed
- 4 = (CNPS) Plants of Limited Distribution
- C1 = Federal Candidate Species, Category 1
- C2 = Federal Candidate Species, Category 2
- C3c = Federal Candidate Species, Category 3

- \*\* Species of concern included in Metropolitan Bakersfield Habitat Conservation Studies.



SOURCE: - DAMES & MOORE, STEBBINS 1980  
 - CALIFORNIA RESOURCES AGENCY,  
 NATURAL DIVERSITY DATA BASE 1986  
 - THOMAS REID & ASSOC., 1987; UNPUB.

**FIGURE V-1**





V-6

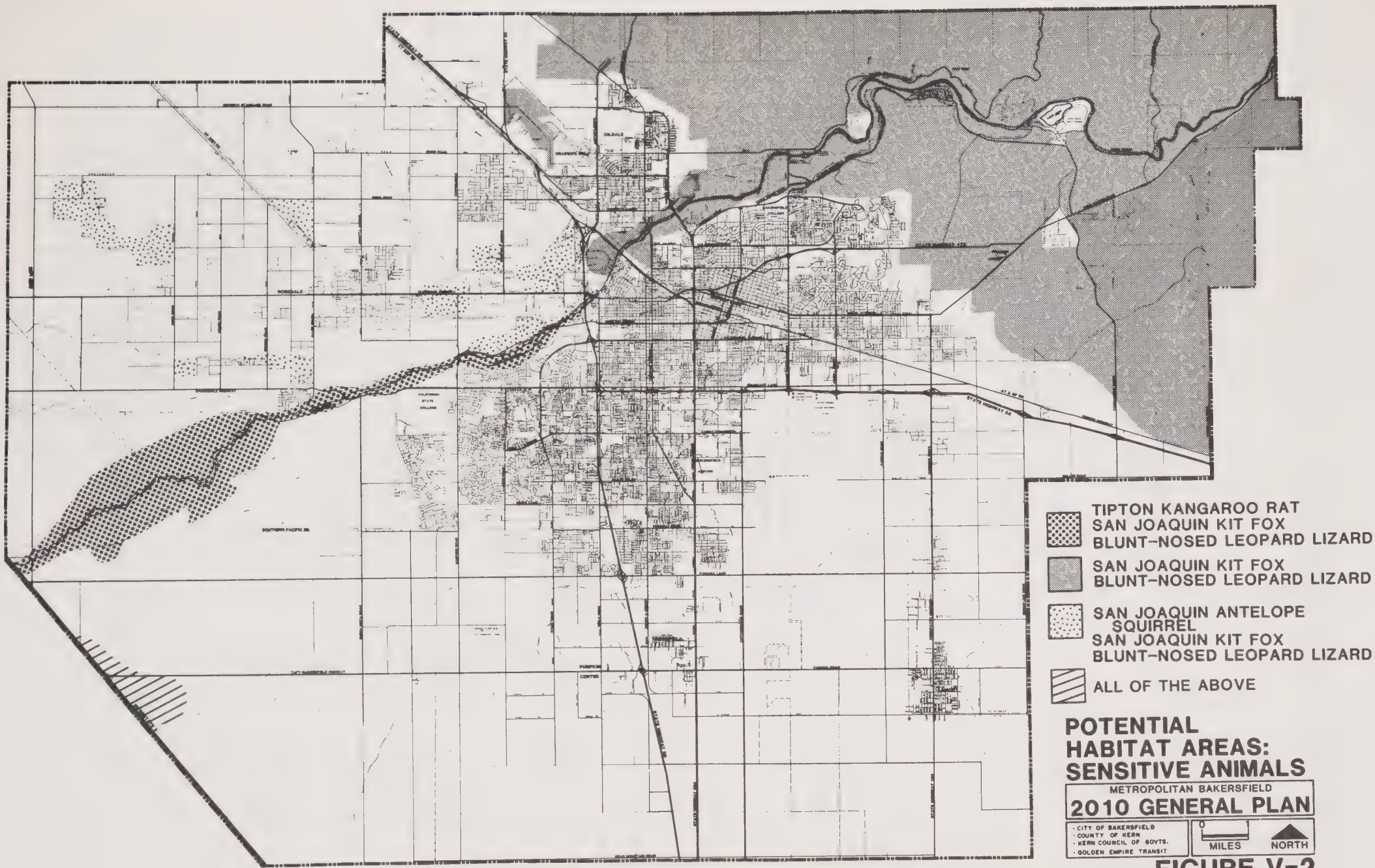


FIGURE V-2





TABLE V-2

Animal Species of Concern Known to Occur or  
Potentially Occurring in the Bakersfield Area

Reptiles

- Giant garter snake (*Thamnophis couchi* gigas; CT\*)  
 \*\* Blunt-nosed leopard lizard (*Gambelia silus*; CE, FE)

Birds

- California condor (*Gymnogyps californianus*; CE, CP, FE)  
 Golden eagle (*Aquila chrysaetos*; CP, CSC)  
 Swainson's hawk (*Buteo swainsoni*; CT)  
 Black-shouldered kite (*Elanus caerulea*; CP)  
 Bald eagle (*Haliaeetus leucocephalus*; CE, CP, FE)  
 American peregrine falcon (*F. peregrinus anatum*; CE, CP, FE)  
 Greater sandhill crane (*Grus canadensis tabida*; CT, CP)  
 Yellow-billed cuckoo (*Coccyzus americanus occidentalis*; CT)  
 Burrowing owl (*Athene cunicularia*; CCS)  
 Least Bell's vireo (*Vireo bellii pusillus*; CE, FE)

Mammals

- \*\* San Joaquin antelope squirrel (*Ammospermophilus nelsoni*; CT)  
 \*\* Giant kangaroo rat (*D. ingens*; CE, FE)  
 \*\* Tipton kangaroo rat (*D. nitratoides n.*; CE, FE)  
 \*\* San Joaquin kit fox (*Vulpes macrotis mutica*; CE, FE)  
 \*\* Short-nosed Kangaroo rat (*Dipodomys nitratoides brevinasus*; CCS)  
 \*\* San Joaquin Pocket Mouse (*Perognathus i. inornatus*; CCS)

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\* Status

- CE = California Endangered  
 CT = California Threatened  
 CP = California Protected  
 CCS = California Candidate Species  
 FE = Federally Endangered  
 FT = Federally Threatened  
 FPE = Federally Proposed as Endangered

- \*\* Species of concern included in Metropolitan Bakersfield Habitat  
 Conservation Plan.

a. Blunt-nosed Leopard Lizard

This species is listed as "endangered" by both the state and federal governments and is fully protected in California. Historically, its range included the San Joaquin Valley and much of the adjacent foothills and valleys. Currently the blunt-nosed leopard lizard occurs in scattered localities in the San Joaquin Valley, the foothills of Tulare, Kings and Kern counties, and Carrizo Plain, and eastern portions of the Coast Range foothills. Its habitat consists of sparsely vegetated plains, alkali flats, low foothills, and washes. It does not usually occur where vegetation is dense or on steep slopes. The primary threat to this species is continued conversion of uncultivated natural habitat to agricultural, industrial, and urban uses.

b. San Joaquin Kit Fox

The San Joaquin kit fox is designated "endangered" by both the federal government and the State of California. Historically the range of this subspecies of the kit fox included the San Joaquin Valley and its adjacent valleys and foothills. Currently, however, it is restricted to the southern San Joaquin Valley, the foothills and valleys bordering the western San Joaquin Valley north to Contra Costa County, and the eastern edge of the San Joaquin Valley north to Tulare County. The kit fox inhabits primarily uncultivated areas of arid grassland or sparse scrub vegetation on valley floors and low hills. Small numbers also exist in certain cultivated areas. Although the most suitable habitat areas for the kit fox are open areas on the perimeter of Bakersfield, this highly mobile species is sometimes observed within urbanized portions of the city.

The primary threat to this species is continued conversion of uncultivated natural habitat to agriculture, industrial, and urban use. Land conversion results in direct mortality of foxes in dens, loss of food sources, and loss of denning sites.

c. San Joaquin Antelope Squirrel

This species is designated threatened by the State of California, but has no federal designation. The San Joaquin antelope squirrel inhabits grassland and sparse scrub vegetation in sandy non-flooded areas. It avoids cultivated areas. Historically the antelope squirrel ranged throughout the flats and low hills adjacent to the Carrizo Plain, Cuyama Valley, and the western San Joaquin Valley south of Los Banos in Merced County. It also occurred in nearly all of the San Joaquin Valley in Kern County and part of Tulare County. Williams (1980) found that it now is restricted to scattered localities on 20 percent of its original range, chiefly in the western portion and reported that essentially none of the remaining habitat is considered prime.

The primary threats to this species are conversion of natural habitat to agricultural, industrial, or urban use; rodenticide application near agricultural areas; and possibly livestock grazing.

## d. Tipton kangaroo rat

The Tipton kangaroo rat is a small mammal species found in alkali-sink and spiny saltbush communities of the Tulare basin. It is listed by both the state and federal governments as endangered. This species ranged historically from Kern to Fresno counties, however, presently less than five percent of the original range still supports this species. Loss of habitat and indiscriminant use of rodenticides are the primary threats to the Tipton kangaroo rat. The Department of Fish and Game reports one occurrence of the Tipton kangaroo rat in the Bakersfield area, however, suitable habitat exists within the Kern River flood channel west of U.S. Highway 99 to Buena Vista Lake and the species is expected to occur in this area.

## 3. Sensitive Natural Communities

The Natural Diversity Data Base reports the occurrence of several sensitive natural communities in the Bakersfield metropolitan area. These communities are considered "rare enough" to merit inclusion in the State's inventory of natural communities (Holland, 1986). For completeness Table V-3 includes a number of communities not reported, but which might reasonably be expected to occur in the planning area.

TABLE V-3

Sensitive Natural Communities Known to Occur or  
Potentially Occurring in the Bakersfield Area

Relictual Interior Dunes	Alkali Seep
Valley Sink Scrub	Freshwater Seep
Valley Saltbush Scrub	Alkali Playa
Sierra-Tehachapi Saltbush Scrub	Cismontane Alkali Marsh
Upper Sonoran Subshrub Scrub	Coastal and Valley Freshwater Marsh
Valley Needlegrass Grassland	Vernal Marsh
Valley Sacaton Grassland	Great Valley Cottonwood Riparian Forest
Wildflower Field	Great Valley Willow Scrub
Northern Hardpan Vernal Pool	Great Valley Mesquite Scrub
Northern Claypan Vernal Pool	Buttonbush Scrub
Alkali Meadow	

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Source: California Department of Fish and Game's Natural Diversity Data Base.



BIOLOGICAL ISSUES

The following biological resource issues have been identified:

- ° Expanding urban uses result in a loss of habitat area for sensitive plant and animal species.
- ° Agricultural and oil extraction practices impact the quantity and quality of sensitive plant and animal species and their habitat.

GOALS AND POLICIES

The following presents the goals and policies for biological resources in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Conserve and enhance Bakersfield's biological resources in a manner which facilitates orderly development and reflects the sensitivities and constraints of these resources.
- 2 To conserve and enhance habitat areas for designated "sensitive" animal and plant species.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Direct development away from "sensitive biological resource" areas, unless effective mitigation measures can be implemented (I-1, I-2, I-3).
- 2 Preserve areas of riparian vegetation and wildlife habitat within floodways along rivers and streams, in accordance with the Kern River Plan Element and channel maintenance programs designed to maintain flood flow discharge capacity (I-3).
- 3 Attempt to consolidate urban development in well-defined centers to minimize disruption and aid in the protection of sensitive biological resources (I-4).
- 4 Discourage, where appropriate, the use of off-road vehicles to protect designated sensitive biological and natural resources (I-5).
- 5 Determine the feasibility of enhancing sensitive biological habitat and establishing additional wildlife habitat in the study area with State and/or Federal assistance (I-6).
- 6 Determine the locations and extent of suitable habitat areas required for the effective conservation management of designated "sensitive" plant and animal species (I-6).
- 7 Investigate the feasibility of including natural areas selected for the habitat conservation plan as a component of the regional park system (I-6).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Conservation Element affecting biological resources. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1      When considering discretionary development proposals, consult available biological resource data covering the area. Determine the potential impacts and necessary mitigation measures for identified biological resources, as required in the California Environmental Quality Act. Regularly consult with responsible resource agencies (California Department of Fish and Game and United States Fish and Wildlife Service) to obtain latest information available.
- 2      Inventory sensitive species and habitats within the planning area, and encourage a continuing search for undocumented habitats.
- 3      Amend the city and county zoning ordinances as appropriate to conserve riparian habitats designated for protection under adopted plans.
- 4      Enforce the provisions of the land use plan for the establishment of activity centers that assist in minimizing urban sprawl.
- 5      Develop ordinances (where appropriate) to protect sensitive biological resources from adverse impacts of off road vehicle use.
- 6      Develop a "Habitat Conservation Plan" (HCP) which will satisfy the requirements for the issuance of a permit for the incidental take\* of endangered species, pursuant to Section 10(a) of the Endangered Species Act. The purpose of the HCP is to provide comprehensive mitigation for development impacts on protected species.

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\* The term "take" as defined in the Endangered Species Act means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct.

## B. MINERAL RESOURCES

### OVERVIEW OF EXISTING CONDITIONS

In conformance with the Surface Mining and Reclamation Act (SMARA), land use decisions that may affect mineral-bearing lands are to be made with the knowledge of these resources. Detailed mineral land classification and designation reports provided by the State Mining and Geology Board are on file with the City of Bakersfield and County of Kern.

The principal mineral resources under development in the project area are oil, natural gas, sand and gravel. The region is a major oil-producing area, with substantial oil and gas fields existing within the planning area boundaries. Production in the planning area accounts for approximately 12 percent of all hydrocarbons produced in California.

Figure V-3 shows the locations of the 14 oil fields in the area, as well as the active sand and gravel extraction areas.

Sand and gravel areas are concentrated primarily along the floodplain and alluvial fan of the Kern River, where these clean, coarse deposits have been left by major floods over the past several thousand years. Sand and gravel are an important resource for construction, development, improvements and physical maintenance, from highways and bridges to swimming pools and playgrounds.

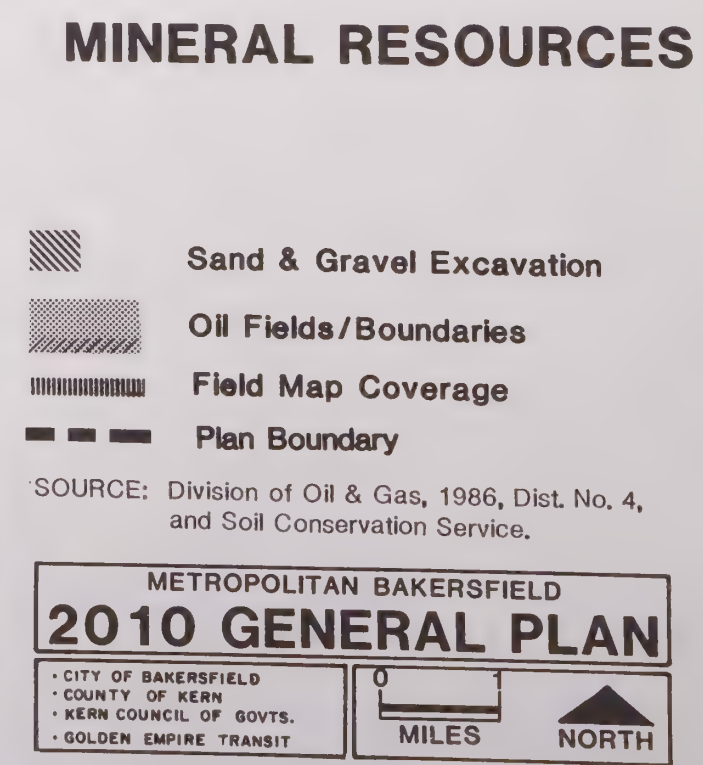
The ready and inexpensive availability of sand and gravel contributes to cost-effective construction, low taxes and affordable prices for housing and commodities. Because transportation costs are a significant portion of the cost of sand and gravel, the long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of the community to residents, business and industry.

There is some potential for fossil and gemstone sites in the foothills of the Sierra Nevada. While not a major economic resource, these may have scientific and natural history value, and would be a positive value to the general image of the local area.









V-14

**FIGURE V-3**





MINERAL RESOURCE ISSUES

The following issues have been identified:

- ° Areas of high potential for quarrying of sand and gravel should be identified and protected to ensure the long-term availability of this economically important resource.
- ° Valuable mineral and energy resources are lost when incompatible urban encroachment is allowed into areas of current and potential resource extraction.
- ° Mineral and energy resource development may result in undesired short- and long-term environmental damage to land, water and air quality resources, and create undesirable visual impacts.



GOALS AND POLICIES

The following presents the goals and policies for mineral resources in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1 Protect areas of significant resource potential for future use.
- 2 Document areas of current mineral and energy resource extraction, as a basis for land use and conservation policies and programs.
- 3 Avoid conflicts between the productive use of mineral and energy resource lands and urban growth.
- 4 Protect land, water, air quality and visual resources from environmental damage resulting from mineral and energy resource development.

POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Develop and maintain maps and descriptions of potential mineral and energy resources as a basis for policy and program implementation (I-1).
- 2 Document the location, status, and long-term viability of sand and gravel quarries and petroleum drilling sites for purposes of avoiding near and long-term land use conflicts and provide a basis for compliance monitoring (I-1).
- 3 Support local mapping and research programs of the California Division of Mines and Geology and Federal agencies that locate and describe mineral and energy resource deposits (I-1).
- 4 Encourage and support the exchange of information on mineral and energy resources between private industry, City of Bakersfield and Kern County (I-1).
- 5 Maintain the 2010 planning area mineral and energy resources mapping program (I-1).

- 7 Land use decisions shall recognize the importance of identified mineral resources and need for conservation of resources identified by the State Mining and Geology Board (I-2).
- 8 Protect significant mineral and petroleum resource areas, including potential sand and gravel extraction areas (I-2).
- 9 Continue implementation of the Kern River Channel Maintenance Program for extraction of river sand and gravel (I-2).
- 10 Require buffer zones of compatible uses adjacent to mineral resource zones (I-2).
- 11 Allow development of resource extraction sites subject to the conditional use permit procedure in zones where such uses are not permitted by right and where it can be shown that proposed extraction uses are compatible with surrounding uses (I-2).
- 12 Encourage preservation of any known deposits of gemstones and fossils (I-1).
- 13 Implement as appropriate the California Environmental Quality Act to minimize land use conflicts and reduce environmental impacts of all proposed resource extraction operations (I-2).
- 14 Prohibit incompatible development in areas which have a significant potential for harm to public health, safety and welfare due to mineral and petroleum extraction and processing (I-2).
- 15 Design resource extraction operations to maintain the integrity of areas of "high environmental quality" and unique scenic value (I-2).
- 16 Require surface mineral resource extraction sites to have plans and procedures for land reclamation, conforming with the requirements of the State Mining and Geology Board, to be implemented upon completion of extraction operations at each site or portion thereof (I-2).
- 17 Review all discretionary mineral or petroleum development including renewal of existing authorizations, under the policies and procedures of the California Environmental Quality Act (I-4).
- 18 Where discretionary permits are required for mineral and energy exploration or development, specify compliance with State, Federal and local standards and attainment programs with respect to air quality, protection of rare, threatened or endangered species, conservation of water quality, watersheds and basins, and erosion protection (I-4).

- 19        Ensure petroleum and mineral development projects provide processes and procedures for the capture, treatment and disposal of all gases, fluids, wastes and spoils in accordance with Federal, State and local regulations (I-4).
- 20        Require petroleum production sites in urban areas to install peripheral landscaping to help reduce the noise, dust and visual impacts to adjacent sensitive receptors and public ways (I-4).
- 21        Require all mineral development to be predicated on appropriate reclamation plans that meet the standards of the State Surface Mining and Reclamation Act and the implementing guidelines of the State Mines and Geology Board, and (or) the standards of the State Division of Oil and Gas.  
Reclamation/restoration of the sites shall be done as each phase of development or extraction is completed (I-4, I-5).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Conservation Element affecting mineral resources. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Mineral resource maps showing present and future resource areas, extraction and drilling sites, areas targeted for conservation, and existing permit areas shall be kept on file with the local planning agency. Available data from the California Division of Mines and Geology, California Division of Oil and Gas, the U.S. Geological Survey, Bakersfield College, California State University Bakersfield, and petroleum and mineral extraction industries within and adjacent to the planning area shall be utilized. This data shall be maintained on an on-going basis as needed.
- 2 Designate mineral resource zoning areas, determine acceptable interim land uses within these zones, and plan suitable buffer zones and compatible land uses around mineral extraction areas. Plans shall concentrate on minimizing land use conflicts and reducing environmental impacts. Unique gem and fossil localities shall be protected from extraction operations. Planning agencies should coordinate with the California Division of Mines and Geology, the California Division of Oil and Gas, the U.S. Geological Survey, and the U.S. Department of Agriculture Soil Conservation service to ensure that development of mineral and petroleum extraction and reclamation efforts are carried out in accordance with all applicable regulations.
- 3 Amend zoning ordinances as needed to accommodate mineral extraction uses outside of mineral resource zones.
- 4 Contact responsible local, State, and Federal agencies upon receipt of application for mineral and/or petroleum resource exploration, or development, to establish development compliance criteria, health hazards safe guards, and restoration/re-vegetation follow-up procedures. Monitoring of exploration, development, production and reclamation should be coordinated through the local planning agency.
- 5 Institute a program, including notification, to enhance the involvement of the aggregate industry in reviewing incompatible land use proposals within proximity to areas containing mineral deposits of statewide significance.

The county will rezone existing quarries, if necessary, to zones consistent with R-MP (Mineral and Petroleum), R-IA (Intensive Agriculture) or Industrial designations.



## C. SOILS AND AGRICULTURE

### OVERVIEW OF EXISTING CONDITIONS

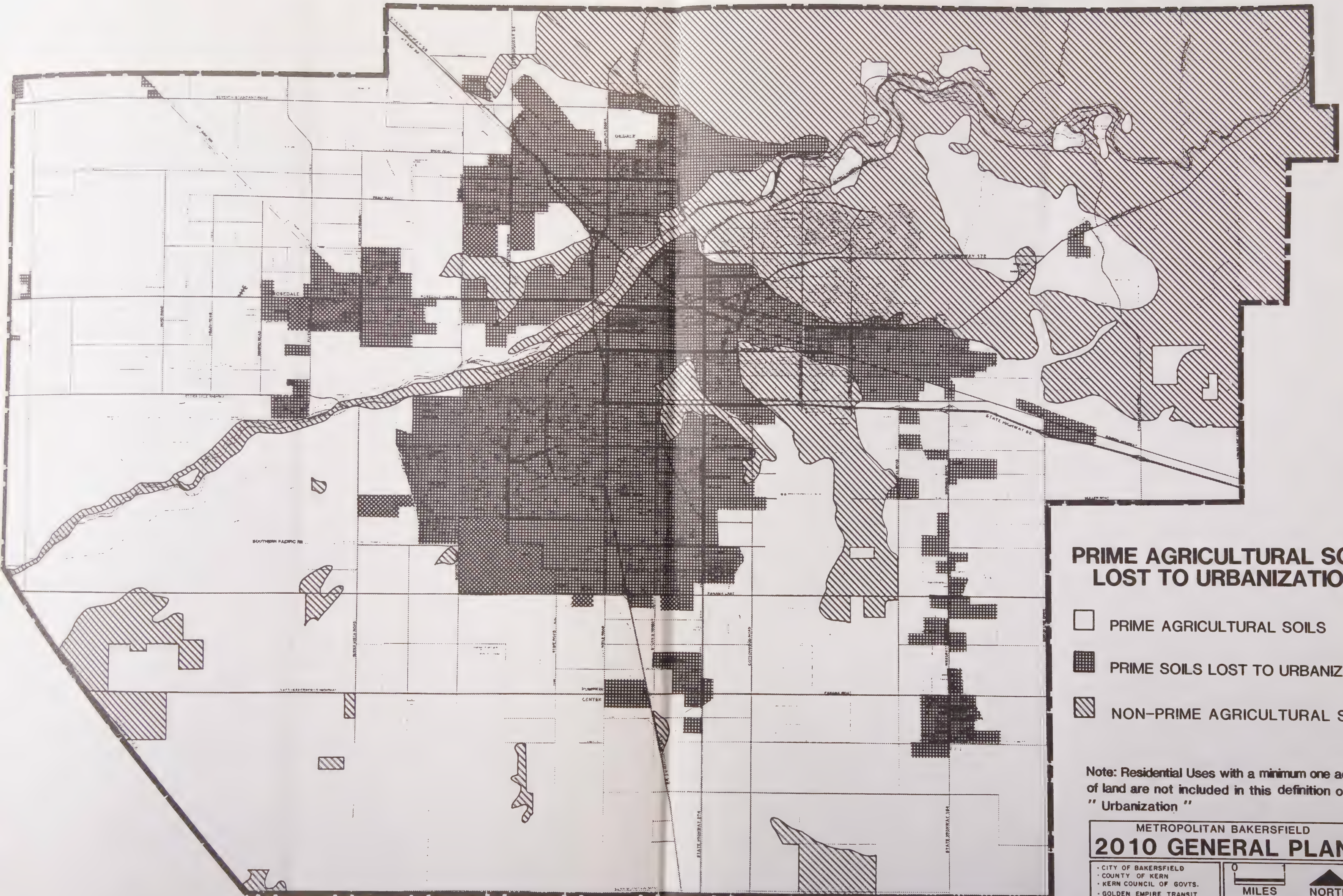
Agriculture in the Bakersfield area has been extensive since the introduction of livestock in the 1860's. Livestock raising on large land grants and some production of grain under dry-farming methods were the chief agricultural pursuits until about 1880. Rapid agricultural development occurred after 1880 due to the development of irrigation, cheap land, favorable crop yields, the advent of two railroads, the development of the petroleum industry and access to markets.

Production figures for primary crops including cotton, alfalfa, milo, wheat and barley, plums, peaches, apricots, citrus, grapes, nuts, truck crops, potatoes and other vegetables show that the Bakersfield area is highly suitable for agricultural cultivation. A review of the California Department of Food and Agriculture Annual Crop Reports indicates a history of high agricultural production for many crops over the years and continuing to the present time. Factors which influence high agricultural productivity today are climate, availability of water, dependable market demand and good soils.




As defined by the California Land Conservation Act (G.C. Sec. 51201), prime agricultural soils include Class I and II soils, storie index 80-100 soils, vineyards and orchards, and soils which yield a minimum of \$200 an acre per year. The extent of prime soils in the planning area is substantial, covering nearly 3/4ths of the area's 405 square miles. Figure V-4 displays the extent of prime agricultural soils in the study area, as well as the loss of prime agriculture soils to urbanization.

Land uses within agricultural areas in the planning boundary are controlled by city and county general plans and zoning ordinances. These documents identify the type of land uses permitted in agricultural zones, and call out the development parameters within each agricultural land use category. Lands under Land Conservation Act (LCA) or "Williamson Act" contract face additional land use restrictions aimed at avoiding the conversion of agricultural lands to other uses. An LCA contract is a mutual agreement between a landowner and the county or city that a given acreage is a viable agricultural unit and should remain as such for the near future. The contract is for a period of ten (10) years beginning the first of January following recordation and is then automatically renewed each year for another ten (10) year period unless a Notice of Nonrenewal is filed. As an economic incentive, the property receives preferred property tax treatment for both prime and non-prime agricultural lands placed under LCA contract.





**PRIME AGRICULTURAL SOILS  
LOST TO URBANIZATION**

-  PRIME AGRICULTURAL SOILS
-  PRIME SOILS LOST TO URBANIZATION
-  NON-PRIME AGRICULTURAL SOILS

Note: Residential Uses with a minimum one acre  
of land are not included in this definition of  
" Urbanization "

METROPOLITAN BAKERSFIELD

**2010 GENERAL PLAN**

CITY OF BAKERSFIELD

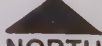
COUNTY OF KERN

KERN COUNCIL OF GOVTS.

GOLDEN EMPIRE TRANSIT

0 1

MILES



NORTH





SOILS AND AGRICULTURE ISSUES

Limitations upon agriculture in the Bakersfield planning area include increased build-up of salts in the soils, and more significantly, development pressures from increasing urban expansion. Subdivision of lands has resulted in substantial prime agricultural acreages being taken out of production. Historic land use patterns of low density sprawl have contributed to the conversion of prime agriculture lands in Bakersfield, as has the depressed agricultural economy.

GOALS AND POLICIES

The following presents the goals and policies for soils and agriculture in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1 Provide for the planned management, conservation, and wise utilization of agricultural land in the planning area.
- 2 Promote soil conservation and minimize development of prime agricultural land as defined by the following criteria:
  - ° capability Class I and/or II irrigated soils
  - ° 80-100 Storie Index rating
  - ° gross crop return of \$200 or more per acre per year
  - ° annual carrying capacity of 1 animal unit per acre per year
- 3 Establish urban development patterns and practices that promote soil conservation and that protect areas of agricultural production of food and fiber crops, and nursery products.

POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Determine the extent and location of all prime agricultural land within the study area (I-1).
- 2 Review development permits that propose subdividing or urbanizing prime agricultural land to ascertain how continued commercial agricultural production in the project vicinity will be affected (I-2).
- 3 Protect areas designated for agricultural use, which include Class I and II agricultural soils having surface delivery water systems, from the encroachment of residential and commercial subdivision development activities (I-2).



- 4 Monitor the amount of prime agricultural land taken out of production for urban uses or added within the plan area (I-3).
- 5 Encourage coordination between the Soil Conservation Service and local planning agencies (I-7).
- 6 Establish land grading controls as necessary to help reduce soil erosion/siltation commonly associated with land development (I-4).
- 7 Land use patterns, grading, and landscaping practices should be designed to prevent soil erosion while retaining natural water-courses when possible (I-4).
- 8 Encourage agricultural uses to employ soil conservation measures to prevent erosion (I-4, I-7).
- 9 Protect prime agricultural lands against unplanned urban development by adopting agricultural zoning, general plan agriculture designation, and by encouraging use of the Williamson Act and supporting programs and policies that provide tax and economic incentives to ensure the long-term retention of agricultural lands (I-5).
- 10 Encourage landowners to retain their lands in agricultural production (I-6).
- 11 Encourage property owners to improve or preserve soil conditions (I-7).
- 12 Prohibit premature removal of ground cover in advance of development and require measures to prevent soil erosion during and immediately after construction (I-4).
- 13 Minimize the alteration of natural drainage and require development plans to include necessary construction to stabilize runoff and silt deposition (I-4, I-7).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Conservation Element affecting soils and agricultural. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Continually update Kern County's Prime Agricultural Lands Map using Soil Conservation Service Maps to determine the location of capability Class I and/or II irrigated soils, and Storie Index 80-100 soils. Consult with Kern County Farm Advisors Office and Agricultural Commissioners Office to determine those areas with economic return equal to or greater than \$200 gross per acre per year or with a carrying capacity of one animal unit per acre per year.
- 2 Evaluate discretionary projects for their impact on agricultural resources.
- 3 Document urban expansion and changes in the amount of agricultural land for purposes of determining cumulative impacts to prime agricultural land.
- 4 Consider soil erosion potential in the development and implementation of grading ordinances.
- 5 Designate prime agricultural land categories and zone and general plan these areas for agriculture usage. Encourage the use of Land Conservation Act contracts in such areas.
- 6 Provide public information on economic incentives available to aid in the preservation of prime agricultural land.
- 7 Coordinate with the Soil Conservation Service to provide technical assistance on improving or preserving soil conditions.

## D. WATER RESOURCES

OVERVIEW OF EXISTING CONDITIONS AND ISSUES

## REGIONAL WATER RESOURCES

Water supply for the Kern County portion of the southern San Joaquin Valley, in which Bakersfield is located, is derived from four major sources--from groundwater, from the Kern River, from the State Water Project, and from the Federal Central Valley Project. The entire area constitutes a major part of the Kern County Water Agency, which contracts with the State for State Water Project water and wholesales such water to retailing public water districts. Of the approximate 950,000 acres of irrigated lands (1985) in the Valley portion of Kern County, an estimated 27,000 acres are not included within the boundaries of one or more of these districts.

With a population of approximately 285,000, primarily concentrated in urban Bakersfield, the principal use of water in the study area is to irrigated agriculture. The present utilization of the area's water supply has been tabulated (by the Kern County Water Agency, in a 1983 report) as being:

Present Utilization of Water Supplies  
(1,000 acre-feet per year)

<u>Source of Water Supply</u>	<u>Irrigated Agriculture</u>	<u>Municipal and Industrial</u>	<u>Ground Water Recharge</u>	<u>Total</u>
Kern River	550	--	60	610
Central Valley Project	390	--	30	420
State Water Project	940	40	20	1,000
Ground Water	<u>1,290</u>	<u>73</u>	<u>--</u>	<u>1,363</u>
TOTAL	3,170	113	110	3,393

In addition to these tabulated sources, local streams and "effective precipitation" (the portion of the area's rainfall which is of crop or groundwater recharge benefit) supply an additional estimated 230,000 acre-feet per year of water supply.

The Kern County Water Agency's consultants concluded, in their 1983 report:

- "(1) In the San Joaquin portion of Kern County, there is a present average annual deficiency of 370,000 acre-feet in water supplies from all sources to meet water requirements. Internal measures which may be undertaken to optimize and enhance water supplies of the county are insufficient to eliminate this deficiency without importation of additional water from outside sources."\*
- "(2) Without augmentation of available water supplies, the deficiency could approach 700,000 acre-feet annually or more in 10 to 20 years depending on the magnitude and timing of occurrence of:
  - a) Increased use of SWP water by other contractors, principally The Metropolitan Water District of Southern California.
  - b) Increases in water supply depletions upstream from the Delta.
  - c) Increases in the net use of water within Kern County."

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\* In its 1987 Water Supply Report, however, the Kern County Water Agency reports a 404,000 acre feet withdrawal in 1987, and a net increase in groundwater storage since 1970 of about 5,000,000 acre feet, due to several wet years in the period.

#### WATER RESOURCES WITHIN THE PLANNING AREA

Study area water resources are shown on Figure V-5. The easterly edges of the clay layers which separate the confined and unconfined aquifers are plotted; the entire plan area, and the southern San Joaquin Valley as a whole, are part of a single groundwater basin.

In the worst case, if the groundwater overdraft is not controlled, the groundwater table ultimately could be lowered to a depth where it is uneconomic to pump for agricultural use. This would reduce withdrawals to balance recharge, achieving a stable groundwater level. Thus, groundwater would still be available for municipal and industrial use, which can afford to pay the higher pumping costs. In the best case, additional imported water supplies could offset the overdraft and stabilize the groundwater level at present levels.











The City of Bakersfield has acquired water rights for Kern River flows for approximately 140,000 acre-feet per year. Together with appropriate storage rights in Isabella Reservoir; it currently sub-contracts to five irrigation districts the usage of a major portion of these rights, utilizing the balance for groundwater recharge in a city-owned 2,800 acre recharge area located on the Kern River westerly of the developed portion of the city. The future use of this water for municipal and industrial purposes is a key factor in the long-range adequacy of the urban water supply of the planning area.

Improvement District No. 4, a subdivision of the Kern County Water Agency is allocated approximately 93,000 acre feet per year of State Water Project surface water, treating 25,000 acre feet of such water for municipal and industrial use and wholesaling the treated water to retail water distribution agencies in the planning area. The remainder of this water is spread for groundwater replenishment.

Much of the planning area relies upon groundwater pumping for its water supply, including the rapidly developing area north of the Kern River. Groundwater quality problems have been identified in this area, particularly in the upper (unconfined) portions of the groundwater aquifer; the State Water Resources Control Board is in the process of conducting studies in this area.

In the northwest portion of the planning area (Rosedale), contaminants include nitrates and dissolved solids which may be indicative of the presence of other water contaminants such as boron, chloride, and possibly D.B.C.P. and arsenic. These contaminants were mapped as part of the Kern County Council of Governments report entitled "West Bakersfield Sewer Study", (February 1980). Additional mapped data regarding both this area, which has potentially significant groundwater degradation problems, and regarding the total study area may be found in various reports on file with the Kern County Water Agency summarizing investigations by its staff, and in the unpublished Groundwater Pollutant Study undertaken by the Kern County Health Department, March, 1980, on file in the City Water Resource Department.

The northeast portion of the planning area has severely limited groundwater supplies; a portion of that area is served by the Olcese Water District with Kern River water. The portion of the area not so served and not within Improvement District (ID) 4 is a subject of concern regarding appropriate water supply availability.

#### WATER RESOURCE ISSUES

The following issues have been identified with respect to the area's water resources:

- ° The conservation and effective utilization of planning area water resources is complicated by multi-jurisdiction control over such resources.



- There are portions of the planning area which are water deficient and/or in which there are problems with water quality.
- Water transport, groundwater recharge needs, recreational usage of water resources, and the preservation and enhancement of water-related natural habitat all compete for the usage of scarce water resources in the planning area.

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## GOALS AND POLICIES

The following lists the goals and policies for each of the fundamental water resources issues of the planning area. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

### GOALS

- 1      Conserve and augment the water resources of the planning area.
- 2      Assure that adequate groundwater resources remain available to the planning area.
- 3      Assure that adequate surface water supplies remain available to the planning area.
- 4      Continue cooperative planning for and implementation of programs and projects which will resolve water resource deficiencies and water quality problems.
- 5      Achieve a continuing balance between competing demands for water resource usage.
- 6      Maintain effective cooperative planning programs for water resource conservation and utilization in the planning area by involving all responsible water agencies in the planning process.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1      Develop and maintain facilities for groundwater recharge in the planning area (I-1, I-2).
- 2      Prevent the loss of water which could be utilized for recharge purposes and benefit planning area groundwater aquifers from diversion to locations outside the area (I-3).
- 3      Support programs for bringing water from other than San Joaquin Valley basin sources to Kern County (I-4).
- 4      Support programs and policies which assure continuance or augmentation of Kern River surface water supplies (I-4).
- 5      Work towards resolving the problem of groundwater resource deficiencies in the upland portions of the planning area (I-5, I-6).
- 6      Protect planning area groundwater resources from further quality degradation (I-7).
- 7      Provide substitute or supplemental water resources to areas already impacted by groundwater quality degradation (I-8).
- 8      Consider each proposal for water resource usage within the context of total planning area needs and priorities--major incremental water transport, groundwater recharge, flood control, recreational needs, riparian habitat preservation and conservation (I-9).
- 9      Utilize the Urban Bakersfield Advisory Committee to Kern County Water Agency as a resource to guide the water planning process (I-10).
- 10     Encourage water conservation measures and programs (I-11).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Conservation Element affecting water resources. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Maintain, and utilize to the fullest extent possible, the City of Bakersfield's 2800-acre spreading basin and all other existing recharge facilities and channels in or serving the planning area groundwater resource.
- 2 Support all financially feasible and practical projects, including the proposed Kern Water Bank, for the augmentation of groundwater recharge for the south San Joaquin Valley basin by the construction and operation of additional recharge facilities or the importation of additional water for basin recharge.
- 3 Oppose the diversion or exportation of water resources which would unduly diminish the availability of such resources for planning area groundwater recharge.
- 4 Provide necessary legislative advocacy and/or funding for implementation of programs to bring additional water to Kern County.
- 5 Initiate and/or support planning, financing, and implementation programs for supplying upland portions of the planning area having groundwater deficiencies with an adequate water supply.
- 6 Support the provision of adequate wastewater collection systems and treatment/disposal facilities which will prevent groundwater degradation by on-site wastewater systems.
- 7 Maintain industrial waste discharge regulation and monitoring programs which protect the planning area groundwater from contaminants
- 8 Provide supplemental or replacement water supplies (such as the city's conjunctive use project) to metropolitan area distribution systems which utilize currently or potentially degraded water supplies.
- 9 Utilize the Kern River Plan Element as a policy guide for consideration of competing water resource needs, including water for municipal, industrial, direct irrigation, groundwater recharge, and recreational uses.
- 10 Implement and continue planning programs such as the ID 4 Urban Water Management Plan.



- 11 Support water conservation measures and programs of benefit to the planning area.

## F. AIR QUALITY

OVERVIEW OF EXISTING CONDITIONS

Within any time period, the local air basin has a restricted ability to dilute contaminants and maintain air quality at levels which do not adversely affect the population. The topography of the southern half of the Central Valley is a significant factor contributing to the degradation of the air quality in Bakersfield. The elevations of the mountain ranges which surround the valley on three sides are high enough to impede the dispersion of pollutants from the basin and emphasize the effect of inversion layers. These layers can vary in height from 2,400 feet down to 1,500 feet. Days on which there are low inversion layers, low mixing heights, and low wind speeds, pollutant concentrations increase, creating very poor air quality. During the winter months there are higher concentrations of carbon monoxide, nitrogen oxide, sulfur oxide, and particulates, with tule fog magnifying these poor air quality conditions. During the summer and fall months there is a greater build-up of ozone, which persists due to stagnation of this regional air mass.

Air quality standards are set by both the State and Federal governments. The Kern County Air Pollution Control District (APCD) has the responsibility to monitor and enforce air quality standards in Kern County. The Environmental Protection Agency has designated the San Joaquin Valley portion of the Kern County air basin as an area which has not attained National Ambient Air Quality standards for ozone, particulates and carbon monoxide\*. Stationary sources, particularly related to the oil industry are thought to contribute approximately 85 percent of the photo-chemically reactive compounds which form ozone (AQMP/NAP, 1982). On-road mobile sources, including cars, trucks and motorcycles, are the most significant contributors to carbon monoxide, which is the gas emitted in the greatest amount from motor vehicle exhaust. The APCD has no jurisdiction over mobile services.

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\* There have been no exceedances of the federal or state one hour carbon monoxide standard since 1976. There have been only two exceedances of the eight hour standard since 1980 and no exceedances of either standard since 1982. The urban area of Bakersfield, however, remains nonattainment for carbon monoxide.

The Land Use and Circulation Elements of the 2010 Plan provide concepts and policies which assist in reducing the amount of pollution emission from mobile sources. These policies are not technological in nature; they are related to land use and transportation planning, regulation and management. Their effect is to reduce vehicle trips, vehicle miles traveled, and pollutant emissions per vehicle mile (cold-start trips emit more pollutants than hot-start trips) and thereby reduce the emission of automobile related air pollutants on both a regional and localized basis. The principal automotive pollutants of concern are carbon monoxide (CO), reactive hydrocarbons (HC) and oxides of nitrogen (NOx). The latter two combine in the presence of sunlight and high temperature to form photochemical ozone (smog). Particulates emitted from tire wear and tail pipes, and resuspended from roads by the wheels of motor vehicles are also of concern.

Examples of policies in the plan which have a positive influence on the above factors include:

- Land Use Policies:

- The centers concept

- Intensification of land use within the urban area

- Allowance for mixed use areas

- Encouragement of planned developments

- Encouragement of pedestrian sensitive areas

- Circulation Policies:

- Provision of landscaping along transportation corridors

- Maintenance of "level of service C"

- Increase consultation with public transit authority

- Progressively timed traffic signalization

- Consideration of transit issues in street design

- Planning for bus turnouts along arterials and collectors

- Promotion of multi-modal transit terminal

Planning for compliance with the federal/state ambient air quality standards has been assigned to the Air Pollution Control District (APCD), who, with the assistance of the Kern Council of Governments (Kern COG), prepares the Nonattainment Area Plan/State Attainment Plan (NAP/AAP) for the San Joaquin Valley Air Basin. The AQMP/NAP focuses on air pollutants for which there are Federal standards. Among the actions recommended in the AQMP/NAP are policies and programs which localities can undertake to help improve air quality. Local jurisdictions are encouraged to incorporate these policies in their general plans, and to adopt supplementary policies as appropriate.

#### AIR QUALITY ISSUES

- Attainment of state and federal air quality standards.

- Balancing economic growth with clean air.

GOALS AND POLICIES

The following presents the goals and policies for air quality in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Promote air quality that is compatible with health, well being, and enjoyment of life by controlling point sources and minimizing vehicular trips to reduce air pollutants.
- 2 Continue working toward attainment of ozone (O<sub>3</sub>) and carbon monoxide (CO) standards as enforced by the Kern County Air Pollution Control District.
- 3 Reduce the amount of vehicular emissions in the planning area.

## POLICIES

- 1 Comply with and promote Kern County Air Pollution Control District (APCD) control measures regarding Reactive Organic Gases (ROG). Such measures are focused on: (a) steam driven well vents, (b) Pseudo-cyclic wells, (c) natural gas processing plant fugitives, (d) heavy oil test stations, (e) light oil production fugitives, (f) refinery pumps and compressors, and (g) vehicle inspection and maintenance (I-1).
- 2 Adopt as part of this general plan policies presented in the County Nonattainment Area Plan for Ozone and Carbon Monoxide (as approved by the environmental protection agency) and as required by 1988 California Clean Air Act which became effective on January 1, 1989, whichever is most restrictive (I-1).
- 3 Encourage land uses and land use practices which do not contribute significantly to air quality degradation (I-1).
- 4 Require dust abatement measures during significant grading and construction operations (I-1).
- 5 Consider air pollution impacts when evaluating discretionary permits for land use proposals. Considerations should include (I-1):
  - a) Alternative access routes to reduce traffic congestion.
  - b) Development phasing to match road capacities.



- c) Buffers including increase vegetation to increase emission dispersion and reduce impacts of gaseous or particulate matter on sensitive uses.
- 6 Consider the location of sensitive receptors such as schools, hospitals, and housing developments when locating industrial uses to minimize the impact of industrial sources of air pollution (I-1).
  - 7 Participate in alternative fuel programs (I-2).
  - 8 Participate in regional air quality studies and comprehensive programs for air pollution reduction (I-3).
  - 9 Promote and assist in the development and implementation of the San Joaquin Valleywide Air Quality Study (I-3).
  - 10 Promote public education regarding air quality issues and alternative transportation (I-4).
  - 11 Implement the Transportation System Management Program (July 1984) for Metropolitan Bakersfield to improve traffic flow, reduce vehicle trips, and increase street capacity (I-1).
  - 12 Improve the capacity of the existing road system through improved signalization and traffic control systems (I-1).
  - 13 Encourage the use of mass transit, carpooling and other transportation options to reduce vehicle miles traveled (I-4).
  - 14 Consider establishing priority parking areas for carpoolers in projects with relatively large numbers of employees to reduce vehicle miles traveled and improve air quality (I-1).
  - 15 Establish park and ride facilities to encourage carpooling and the use of mass transit (I-1).
  - 16 Promote the use of bicycles by providing attractive bicycle paths and requiring provision of storage facilities in commercial and industrial projects (I-1).
  - 17 Cooperate with Golden Empire Transit to provide a comprehensive mass transit system for Bakersfield; require large-scale new development to provide related improvements, such as bus stop shelters and turnouts (I-1).
  - 18 Continue to participate with the vehicle smog-check and maintenance programs (I-1).
  - 19 Encourage walking for short distance trips through the creation of pedestrian friendly sidewalks and street crossings (I-1).

- 20 Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services to minimize vehicular travel (I-1).
- 21 Provide the opportunity for the development of residential units in concert with commercial uses (I-1).
- 22 Disperse urban service centers (libraries, post offices, social services, etc.) to minimize vehicle trips and trip miles traveled and concomitant air pollutants (I-1).
- 23 Require the provision of secure, convenient bike storage racks at shopping centers, office buildings, and other places of employment in the City of Bakersfield (I-1).
- 24 Encourage the provision of shower and locker facilities by employers, for employees who bicycle or jog to work (I-1).
- 25 Encourage employers to implement programs for staggered work hours, compressed work weeks, or other measures which relieve vehicle congestion during commute periods and reduce total work trips (I-1).
- 26 Require design of parking structures and ramps to provide adequate off-street storage for entering vehicles to minimize on-street congestion and avoid internal back-up and idling of vehicles (I-1).
- 27 Consider restriction or elimination of on-street parking for the purpose of providing increased road or intersection capacity during peak traffic hours (I-1).
- 28 Local governments should work with local transit authorities to increase the attractiveness of passenger staging areas through the provision of waiting shelters, landscaping and drinking fountains (I-1).
- 29 Encourage the use of "teleconferencing" and other state-of-the-art technology as a means of reducing daily business related traffic (I-4).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Conservation Element affecting air quality. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Amend as needed the City and County Zoning Ordinances to:
  - a) Incorporate the provisions of the Air Quality Management Plan.
  - b) Incorporate measures identified under the Transportation System Management Plan for Metropolitan Bakersfield.
  - c) Limit intrusions into the pedestrian right-of-way.
  - d) Require air quality design considerations indicated in policies 23 and 26.
- 2 Continue implementation and monitoring of the city's pilot program with regard to a methanol powered vehicle fleet and investigate other potential cleaner burning energy sources.
- 3 Continue support of comprehensive air pollution control investigation and implementation strategies.
- 4 The city and county should work with the appropriate air quality and transportation agencies toward education of the general public with regard to air quality issues and alternate modes of transportation.







# CHAPTER VI – OPEN SPACE ELEMENT

## STATUTORY REQUIREMENTS

State planning law requires jurisdictions to prepare a plan for the long-range conservation and preservation of open space. As defined by the State, open space should include lands for: (a) the preservation of natural resources; (b) the managed production of resources; (c) outdoor recreation; and (d) public health and safety. Under this broad definition, open space is encompassed in several General Plan elements including Land Use, Conservation, Parks and Safety. To minimize repetition this Open Space Element will deal with those open space amenities not covered in these other elements.

## OVERVIEW OF EXISTING CONDITIONS AND ISSUES

There are approximately 215,212 acres of agriculture/open space in the planning area (see Table I-1 in Land Use), representing over 80 percent of the total land use acreage. The majority of this open space is devoted to agricultural uses, consisting of both row and tree crops, and to large tracts of land devoted to oil explorations. Non-farm and non-oil open space occurs predominately in the floodplain areas along the Kern River, with large floodplain areas occurring west of Allen Road; in the steeper hillside areas east of Comanche Drive; and along Alfred Harrell Highway.

The Kern River Plan Element establishes policies aimed at protecting what is thought of as the area's greatest natural resource, the Kern River. Due to both the size and extent of the Kern River within the study area, the river offers the highest potential for the provision of regional open space opportunities.

## OPEN SPACE ISSUES

Significant issues regarding the planning area's open space resources are as follows:

- ° The planning area lacks a cohesive system of open space amenities, with many of the area's major amenities including the Kern River, bluffs and foothills being under-utilized as open space resources.
- ° The aesthetic value of open space areas and the impact of development on public viewsheds should be considered.
- ° Cut-and-fill grading techniques employed to accommodate development alter natural topography and ridgelines.

GOALS AND POLICIES

The following presents the goals and policies for open space in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Conserve and enhance the unique aspects of open space within the planning area.
- 2 Create an integrated system of open space amenities in the planning area.
- 3 Locate and site development to minimize the disruption of open space areas.
- 4 Acquire new lands for open space.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Promote the establishment, maintenance and protection of the planning areas open space resources, including the following (I-1):
  - a) conservation of natural resources (refer to Chapter II-Land Use, Chapter V-Conservation, and Chapter XII Kern River Plan Element).
    - ° Kern River corridor
    - ° management of hillsides
  - b) managed production of resources
    - ° agriculture (refer to Chapter V-Conservation Soils and Geology)
    - ° oil production (refer to Chapter V-Conservation Mineral Resources)
  - c) Outdoor recreation
    - ° parks (refer to Chapter XI-Parks)
    - ° Kern River corridor (refer to Chapter II-Land Use Chapter V-Conservation, and Chapter XII-Kern River Plan Element)

## d) public health and safety

- ° hazard avoidance (refer to Chapter VIII-Safety)

- 2 Development of ridgelines within the planning area should consider natural aesthetic value and topographic constraints (I-2).
- 3 Hillside development should exhibit sensitivity and be complementary to the natural topography (I-2).
- 4 Require the use of grading techniques in hillside areas which preserve the form of natural topography and ridgelines (I-2).
- 5 Development location and siting should be sensitive to its relationship to the Kern River (I-3).
- 6 Development on or adjacent to bluff areas should complement the aesthetic integrity of such areas (I-2).
- 7 Encourage the assembly and reuse of land parcels for open space amenities as they recycle in the urban area (I-4, I-5).
- 8 Consider the use of groundwater recharge lands for recreation, habitat and alternate resource uses (I-6).
- 9 Consider reuse of abandoned landfill areas for recreational and open space purposes where it can be shown that the landfill does not present a health hazard (I-6).
- 10 Encourage depleted resource extraction sites to be restored as alternative open space or developed with uses compatible with those adjacent (I-6).



IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Open Space Element. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1      Implement the programs identified in the Land Use, Parks and Recreation, Biological Resources, Mineral Resources, Soils and Geology, and Hazards sections of the General Plan as they relate to open space.
- 2      Adopt a Hillside Management Ordinance for the City of Bakersfield to regulate development in areas of excessive slope in northeast Bakersfield and augment the Kern County's existing ordinance as necessary.
- 3      Implement Kern River Plan Element policies regarding development sensitivity to the river resource.
- 4      Utilize redevelopment techniques to assemble contiguous land parcels and provide open space in the urban area.
- 5      Agencies involved in groundwater recharge projects should coordinate as appropriate to achieve multiple use of recharge areas where feasible.
- 6      Where appropriate, rezone abandoned landfill areas and resource extraction sites to allow open space or development uses complementary of and compatible with surrounding uses.





# CHAPTER VII – NOISE ELEMENT

## STATUTORY REQUIREMENTS

The contents of a Noise Element and the methods to be used in its preparation have been determined by the requirements of Section 65302(f) of the California Government Code and by "Guidelines for the Preparation and Content of Noise Elements of the General Plan" published by the California Office of Noise Control (ONC) in 1976. The Government Code and ONC Guidelines require that certain major noise sources and areas containing noise sensitive land uses be identified and quantified by preparing generalized noise exposure contours for current and projected levels of activity within the community. Contours may be prepared in terms of either the Community Noise Equivalent Level (CNEL) or the Day-Night Average Level (Ldn) which are both descriptors of total noise exposure at a given location for an annual average day. It is intended that the noise exposure information developed for the Noise Element be incorporated into the general plan to serve as a basis for achieving land use compatibility with respect to noise through the long-range planning and project review processes. It is also intended that noise exposure information be used to provide base line levels and noise source identification for use in the development and enforcement of a local noise control ordinance.

According to the Government Code and ONC Guidelines, the following major noise sources should be considered in the preparation of a Noise Element:

- ° Highways and freeways
- ° Primary arterials and major local streets
- ° Railroad operations
- ° Aircraft and airport operations
- ° Local industrial facilities
- ° Other stationary sources

Due to the size and scale of the noise contour maps (1"=400'), they are not reproduced in this document, but can be referenced in the City of Bakersfield Planning Department at City Hall or the Kern County Department of Planning and Development Services.

Also to be considered in the Noise Element are areas containing the following noise sensitive land uses:

- ° Schools
- ° Hospitals
- ° Rest homes
- ° Long-term medical or mental care facilities
- ° Other uses deemed noise sensitive by the local jurisdiction

The purpose of this Noise Element is to provide a means for protecting local citizens from the harmful effects of excessive exposure to noise.



This may be accomplished by mitigating noise conflicts where they presently exist and by minimizing future noise conflicts by the adoption of specific policies intended to achieve land use compatibility with respect to noise within the community.

Appendix C provides a discussion of the effects of noise on people, techniques for noise control, and a model community noise ordinance. It is intended that this data serve as reference when reviewing documents which refer to the measurement and effects of noise within the community.

## OVERVIEW OF EXISTING CONDITIONS

### MAJOR NOISE SOURCES

Based on discussions with government officials and the results of field studies by Brown-Buntin Associates (BBA), it was determined that there are four major sources of community noise within the study area. These sources are traffic on state highways and major local streets, railroad operations, airport operations and local industrial activities. Specific noise sources selected for study are listed below and their generalized locations are depicted in Figure VII-1.

#### STATE HIGHWAYS

- State Route 58
- State Route 99
- State Route 119
- State Route 178
- State Route 184
- State Route 204

#### MAJOR LOCAL STREETS (See Appendix C)

#### RAILROAD OPERATIONS

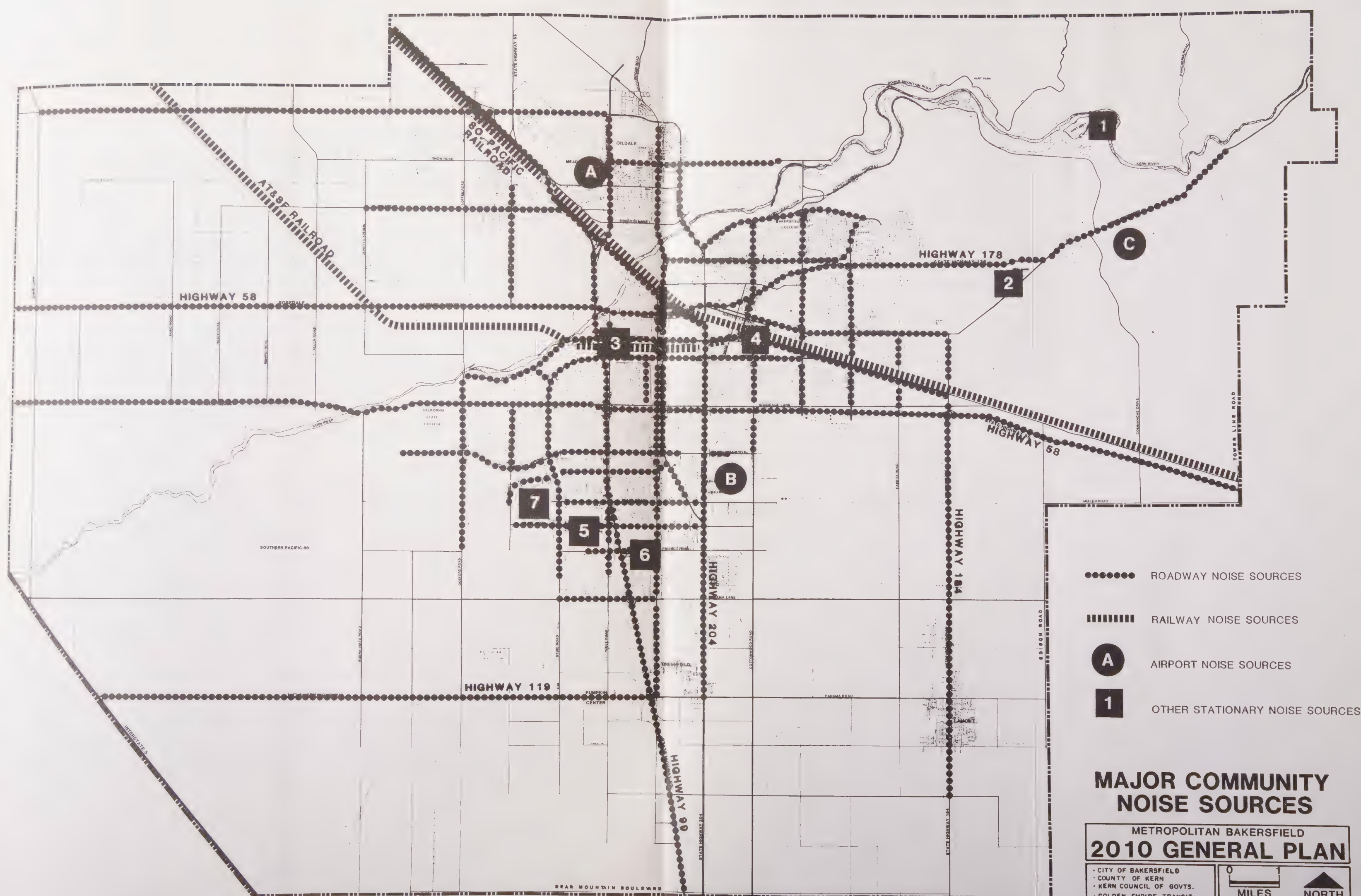
- Atchison, Topeka and Santa Fe Railway (AT&SF)
- Southern Pacific Transportation Company (SPTCo.)

#### AIRPORT OPERATIONS

- Kern County Airport (Meadows Field)
- Bakersfield Airpark
- Rio Bravo Airport

#### INDUSTRIAL FACILITIES AND OTHER MAJOR STATIONARY NOISE SOURCES

- Lake Ming Boat Races
- Mesa Marin Raceway
- AT&SF Classification Yard
- SPTCo. Classification Yard
- Kern Rock Company







- Calcrete
- Coors Recycling Center
- United States Cold Storage

A combination of noise monitoring and analytical noise modeling techniques was used to develop generalized noise exposure contours around the major noise sources identified above for existing (1985 or 1986) and future (2010) conditions.

Analytical noise modeling techniques generally make use of source-specific data including average levels of activity, hours of operation, seasonal fluctuations, and average levels of noise from source operations. Analytical methods have been developed for a number of environmental noise sources including roadways, railroad line operations, railroad yard operations, industrial plants and aircraft/airport operations. Such methods will produce reliable results as long as data inputs and assumptions are valid for the sources being studied. The analytical methods used in this report closely follow recommendations made by ONC, and were supplemented where appropriate by field-measured noise level data to account for local conditions. It should be noted that the noise exposure contours presented in this report are based upon annual average or in some cases maximum noise level conditions, and are not intended to be site-specific where local topography, vegetation or intervening structures may significantly affect noise exposure at a particular location.

### 1. Highways and Major Local Streets

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop Community Noise Equivalent Level (CNEL) contours for state highways and major local streets within the study area. The FHWA Model is based upon reference energy emission levels for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the area surrounding the roadway. The FHWA Model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions, and is generally considered to be accurate within plus or minus 1.5 dB. To predict CNEL values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Traffic volumes and truck percentages for existing (1985-86) and future (2010) conditions on the state highways in the study area were obtained from Caltrans as summarized in Appendix C. Future projections of annual average daily traffic volumes on state highways are based upon a yearly growth factor of 3.6 percent which is the five-year average for 1979-1984 as published by Caltrans. Traffic volumes for existing and future conditions on major local streets were obtained from the City of Bakersfield and County of Kern Public Works Departments.



Using traffic data from the appendix and the FHWA methodology, traffic noise levels as defined by CNEL were calculated for existing (1985-86) and projected future (2010) traffic volumes on the state highways and the major local streets identified for study. Distances from the center of the roadway to CNEL contour values of 65 and 60dB are summarized in the appendix. The approximate locations of the 60 and 65 dB CNEL contours for these roadways have been plotted on 400 scale maps, on file at City of Bakersfield City Hall. Only those contours which are located at distances of greater than 75 feet from the center of the roadway are shown on the 400 scale maps. It should be noted that since the methodology used to develop generalized contours did not take into consideration shielding which may be caused by buildings or topography in some areas, the distances reported in the appendix and as indicated on the 400 scale maps should be considered as worst-case estimates of traffic noise exposure in the community.

## 2. Railroad Operations

Two rail companies provide service in the Bakersfield area. The AT&SF provides passenger service (Amtrak) from Bakersfield through the San Joaquin Valley on the AT&SF mainline which passes through the northwestern part of the study area. AT&SF freight service is provided on the same line and also on the SPTCo. mainline which generally parallels State Route 58 enroute to Tehachapi. SPTCo. freight service is provided on the above described mainline along State Route 58 and in the northern part of the study area parallel to State Route 99. Three branch lines provide freight service to industrial or outlying areas.

Operational data supplied by the railroad companies for existing (1986) operations are shown in Table VII-1. It should be noted that the number of train operations and, day/evening/night distributions for the AT&SF Arvin Branch reflects a "worst case" operational scenario during the packing season when packing sheds in the Lamont/Arvin area are shipping perishable produce. Projected future AT&SF and SPTCo. operational data were not available from the railroad companies.

Noise measurements of AT&SF and SPTCo. trains were conducted in Bakersfield in May 1986 to document noise levels generated by individual rail movements in the community. Measurements of noise levels from AT&SF and SPTCo. rail movements were conducted near Edison Highway at Morning Drive and near Edison Highway at Oswell Street on the SPTCo. mainline in the eastern portion of the study area. Noise levels from other SPTCo. rail movements were measured along the SPTCo. mainline near Norris Road and Pegasus Drive. Typical maximum noise levels at the above-described locations ranged from 82.0 to 98.0 dB(A) at 100 feet from the center of the tracks. Sound Exposure Levels (SEL) for the same measurements ranged from 95.1 to 108.0 dB(A). Noise level measurements conducted in 1983 along the AT&SF mainline in the northwestern portion of the study area indicated that maximum noise levels from freight trains at approximately 200 feet from the center of the track ranged from 81.0 to 85.0 dB(A) with SEL values ranging from 95.9 to 98.9 dB(A). AT&SF passenger trains (Amtrak) produced maximum levels of approximately 78 dB(A) and SEL values of approximately 86 dB(A) at the same location. Noise level measurements of branch line operations conducted

TABLE VII-1

Railroad Operational Data  
AT&SF and SPTCo.  
1986 Operations

<u>Railway Segment</u>	<u># Freight Trains/ Day</u>	<u># Passenger Trains/ Day</u>	<u>Distribution Day/ Evening/ Night</u>	<u>Speed</u>
SPTCo. Mainline (from SPTCo. yard to the northwest)	20	-	60%/10%/30%	60 mph
SPTCo. Mainline (from SPTCo. yard to Edison-combined SPTCo. and AT&SF operations)	36	-	60%/10%/30%	60 mph
AT&SF Mainline (from AT&SF yard to the northwest)	17	4	60%/10%/30%	60 mph*
AT&SF Oildale Branch	2	-	100%/0%/0%	25 mph
SPTCo. McKittrick Branch	2	-	100%/0%/0%	25 mph
AT&SF Arvin Branch**	12	-	0%/20%/80%	25 mph

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\* 79 mph for passenger trains.

\*\* Representative of peak season conditions.

Note: Future projections of railroad operational data were unavailable from the railroad companies.

Source: AT&SF and SPTCo.

during the past 4 years for similar studies in the Bakersfield area indicates that typical maximum noise levels are approximately 77.0 dB(A) with SEL values of approximately 91.0 dB(A) at approximately 100 feet from the center of the tracks.

Noise exposure levels as defined by CNEL for railroad operations in the study area were calculated using the Simplified Procedure for Assessment of Noise Emitted by On-Line Railroad Operations, prepared by Wyle Laboratories (Report No. 59197-1) in March 1974 and the railroad operational data summarized in Table VII-1. The Wyle Methodology is an analytical method used to predict railway noise which is based upon reference energy emission levels for diesel locomotives and freight/passenger cars with consideration given to numbers of locomotives and cars, speed, track conditions, and distance to the receiver. Using the above-described methodology and operational data, the approximate distances to CNEL contours were calculated as summarized in Table VII-2. The approximate locations of the 65 and 60 CNEL contours for 1986 conditions are shown on the 400 scale maps. As in the case of traffic noise contours, railroad noise contours should be considered as estimates of worst-case exposure since no adjustments have been made for shielding provided by intervening topography or buildings. It should be noted in Table VII-2 that increased distance to noise contours within 1,000 feet of grade crossings is due to the required sounding of the warning horn which creates a greater noise impact in these areas. CNEL contours for the McKittrick and Oildale branch lines have not been illustrated on the 400 scale maps. Although noise levels from individual train movements on these branch lines produce short term noise impacts when they occur, such impacts do not occur frequently enough to produce a significant noise exposure as defined by CNEL.

### 3. Airport Operations

#### a. Kern County Airport (Meadows Field)

The Kern County Airport (Meadows Field) is owned and operated by the Kern County Department of Airports. Both general aviation and commercial aircraft operations take place at the airport. The main runway, 30R-12L has recently been extended by 2,400 feet to a total length of approximately 9,100 feet. The landing threshold of Runway 30R has been displaced by 3,500 feet. Approximately 105,000 yearly operations occur at the airport.

The last noise analysis of Meadows Field operations was done by Wilbur Smith and Associates in 1981, who prepared noise exposure contours in terms of CNEL for current (1980) and projected future (1986) operations. The projected future noise exposure contours depicted 2 scenarios: one with the planned runway extension and concurrent landing threshold displacement and one without construction of runway improvements. Both scenarios included a significant number of corporate jet aircraft training operations. The aircraft operational data which were used to prepare the projected 1986 noise exposure contours are shown in Table VII-3. The contours were prepared using Version 2.7 of Federal Aviation Administration's Integrated Noise Model (INM).

TABLE VII-2

Distance (Feet) from Center of Track to CNEL Contour Values  
for Existing (1986) Railroad Operations

<u>Railroad</u>	<u>Segment</u>	<u>CNEL 65 dB</u>	<u>CNEL 60 dB</u>
SPTCo.	SPTCo. Mainline Yard to the northwest (within 1,000' of grade crossings)	342 (631)	730 (1,360)
STPCo./AT&SF Combined Operations	SPTCo. Mainline Yard to Edison (within 1,000' of grade crossings)	464 (858)	1,000 (1,848)
AT&SF	AT&SF Mainline Yard to the northwest (within 1,000' of grade crossings)	342 (631)	730 (1,360)
AT&SF	SPTCo. Arvin Branchline (within 1,000' of grade crossings)	369 (681)	794 (1,468)
SPTCo.	SPTCo. McKittrick Branchline (within 1,000' of grade crossings)	25 (46)	54 (100)
AT&SF	SPTCo. Oildale Branchline (within 1,000' of grade crossings)	25 (46)	54 (100)

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Note: Projections of future railroad operations were not available from the railroad companies.

Source: Brown-Buntin Associates.



TABLE VII-3Projected (1986) Airport Operational Data  
Meadows Field

<u>Average Daily Operations</u>	<u>Projected 1986 Data</u>
Total Aircraft	658
Jet Carrier Aircraft (DC-9's)	12
Commuter	24
Corporate Jet	54*

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\* Includes 25 training operations.

Source: Wilbur Smith and Associates, 1981.

Many of the assumptions which were the basis for the 1986 contours have not been realized. Daily operations are now estimated at 288 and jet training operations are an occasional rather than a continual characteristic of the airport. The INM has also been updated to Version 3.8 which has been found to more accurately predict aircraft noise exposure. Based upon the above-described changes in airport operations, airport configuration and noise modeling methodologies, it is recommended that new CNEL contours be prepared for the airport.

#### b. Bakersfield Airpark

In February 1988, a noise impact study was conducted by consulting firm Peat Marwick for the Supplemental EIR of the Bakersfield Airpark Master Plan Update. The methodology used to derive the noise contours was the "FAA's Integrated Noise Model (INM) Version 3.9."

Bakersfield Airpark is owned and operated by the City of Bakersfield. Current annual operations at the Airpark are approximately 50,000 including general aviation and commercial (crop duster) operations. The airport presently has a single runway (Runway 31-13). Under this existing airpark configuration, the area exposed to 65 dB CNEL and above is property owned and used exclusively by the Airpark. The noise contours for Year 2010 were based on a 16-34 runway (the 13-31 runway would be decommissioned) and the projected increase in the number and type of aircraft operations. The 2010 noise contours show the 70 and 75 dB CNEL contours on Airpark property. The 65 dB CNEL contour extends approximately 600 feet south of East White Lane. This area within the 65 dB CNEL is designated for industrial uses deemed compatible within airpark operations.

#### c. Rio Bravo Airport

Rio Bravo Airport, a privately-owned facility, is located adjacent to State Route 178 about 9 miles east of downtown Bakersfield. One runway, 26-8, is located at the airport. CNEL contours for 1982 and projected 1996 operations at the airport were prepared by Brown-Buntin Associates in 1982, based upon data supplied by Nickle Enterprises. According to the airport owners, the data and assumptions that formed the basis of Brown-Buntin Associates' 1982 analysis have not changed significantly, indicating that a new analysis of noise impacts at the airport is not needed at this time.

### 4. Industrial Facilities and Other Stationary Noise Sources

#### a. Calcrete

The Calcrete plant is located near the intersection of Pacheco and Wible Roads. The plant manufactures lightweight concrete blocks 5-6 days per week between the hours of 7:00 a.m. and 4:00 p.m. Occasionally the plant operates a 12-hour shift which ends at 7:00 p.m. The most significant sources of noise associated with this operation are vibrators located in the sand and cement bins to keep materials moving through the system.

The vibrators each operate approximately 60 times per 8-hour shift for approximately 30-50 seconds per cycle. Maximum noise levels during the operation of the cement bin vibrator, which is the louder of the two, were 60-65 dB(A) at approximately 500 feet northwest of the plant. Based upon the above-described noise level data and operational data, a generalized 60 dB CNEL contour was prepared depicting a worst case condition with a 12-hour work shift beginning at 7 a.m. Significant changes in plant operations which would affect noise levels are not expected by plant management in the foreseeable future.

#### b. Lake Ming Boat Races

Lake Ming, located about nine miles northeast of central Bakersfield, is operated by the Kern County Parks and Recreation Department as a recreational lake for both power and sail boats. Several times each year, boat racing consisting of circle boat or drag boat racing, is permitted on the lake. Racing generally begins about 8 a.m. and ends by 5 p.m. On April 19, 1986, Brown-Buntin Associates monitored noise levels from drag racing events at four different locations around the lake in order to determine maximum noise levels ( $L_{max}$ ) affecting residences in Cattle King Estates situated west of the lake.

The residential monitoring site was located approximately 2,500 feet from the center of the lake on the balcony of 6055 Roundup Way which faces the lake and provides a fairly unimpeded view of the drag racing area. This location may be considered as representative of a worst-case residential exposure to boat racing on Lake Ming. Maximum noise levels at this location varied from 71 to 84 dB(A) with a mean noise level of about 80 dB(A) for the unblown gas-hydro racing classification. For the top fuel hydro classification, levels ranged from 73 to 94 dB(A) with a mean level of about 85 dB(A).

Noise levels were also measured at locations closer to the racing events to determine the maximum noise levels near the spectator areas, and to establish noise level attenuation with distance factors, based upon a comparison of measurements for the same events at different locations. One of the sites used for these measurements was located above the marina on a bluff approximately 1,200 feet south of the center of Lake Ming. Maximum noise levels at this site for unblown gas hydros ranged from 79 to 87 dB(A), and from 92 to 96 dB(A) for boats in the top fuel classification. Maximum noise levels at this location were typically 4 to 10 decibels greater than at the 6055 Roundup Way monitoring site. The other measurement sites were located within the spectator area and near the eastern end of the lake at the boat staging area. Maximum noise levels at these areas ranged from 104 to 115 dB(A). Maximum noise levels at these sites were typically 31-32 dB greater than at the 6055 Roundup Way monitoring site.

Brown-Buntin Associates' drag racing noise level measurements were compared to those conducted by the Kern County Health Department April 30 and May 1, 1983 on a vacant lot just east of 6055 Roundup Way. The typical maximum noise level recorded by the Health Department was 78 dB(A), which is somewhat lower than the levels recorded by Brown-Buntin Associates. This



discrepancy may be accounted for by the comparatively near ground location of the Health Department's microphone, which would provide more potential for absorption. Additionally, it is possible that the Health Department measured less powerful boats, which potentially would result in lower noise levels.

The noise levels recorded by Brown-Buntin Associates and Kern County indicate that drag boat racing activity on Lake Ming can conflict with noise-sensitive land uses in the area. A generalized 75 dB(A) maximum noise level contour for boat racing activities at Lake Ming based upon the above-described noise level data are shown on the 400 scale 1986 and 2010 noise exposure contour maps. 75 dB(A) represents the maximum exterior daytime noise level currently allowed by the City of Bakersfield Noise Element for residential properties. CNEL contours for boat racing on Lake Ming were not prepared since such activities occur only a few times per year.

#### c. Mesa Marin Raceway

Mesa Marin Raceway is located near the intersection of State Routes 178 and 184 about 8 miles east of central Bakersfield. Classes of modified stock cars racing at the track include Street Stocks, Super Modified Stocks, and Open Competition Stocks. The racing schedule for 1986 begins in March and ends in October. Racing starts about 7 p.m. and generally continues to approximately 11 or 11:30 p.m. The track is flanked by earthen berms of unequal height on all sides. The highest berm segment is on the southern side of the track, on which the spectator stands are located.

Noise level measurements near Mesa Marin Raceway were conducted by Brown-Buntin Associates during the evening of April 19, 1986. Typical median (L<sub>50</sub>) noise levels recorded ranged from 61 to 70 dB(A) with typical maximum levels reaching 87 dB(A). At the nearest existing residential location in El Dorado Estates, about 2 miles from Mesa Marin maximum noise levels of 48-52 dB(A) were recorded. At a site 0.9 miles west of the raceway, maximum noise levels ranged from 58-62 dB(A). In the parking lot of the raceway, maximum noise levels of 60-67 dB(A) were recorded. It should be noted that at this location the earthen berm which borders the southern portion of the oval track considerably reduces noise levels. Based upon the above-described topographical factors and noise level data, the worst case 70 and 75 dB(A) maximum noise level contours were plotted on 400 scale maps. CNEL contours were not prepared for this facility due to the relatively infrequent use of the track.

#### d. Kern Rock Company

The Kern Rock Company sand and gravel operation is located approximately 1,500 feet west of the intersection of Wible and Pacheco Roads. Noise generating activities include truck traffic (hauling sand and gravel to the stockpile area, picking up loads of bulk cement and hauling concrete ready-mix), and the operation of the plant itself. The plant operates from 5 a.m. to 4 p.m., five days per week during the busy season. Approximately 20-25 truckloads of sand and gravel are brought into the plant on an average day, and about 70-80 truckloads of concrete leave the plant on an



average day. Noise studies conducted in 1984 indicated that trucks moving in and out of the plant generated maximum noise levels of 70 dB(A) at 100 feet, that truck back-up warning bells generated maximum levels of 70-73 dB(A) at 100 feet and that maximum noise levels from the batch plant were 60-65 dB(A). Based upon the above-described noise levels and plant operational data, the location of the 60 dB CNEL contour was estimated to be 300 feet from the plant.

e. Atchison, Topeka and Santa Fe Railway Company:  
Railroad Classification Yard

The AT&SF railroad yard is located east of Oak Street between 16th Street and California Avenue. Railroad switching operations generally occur 24 hours a day and 7 days a week. Other sources of noise within the facility include a mechanical refrigerator car servicing facility and idling switcher and road locomotives which are being serviced or awaiting assignment. Generalized CNEL contours for this facility were prepared using operational data obtained from the railroad for existing conditions. These are shown on the 400 scale noise exposure maps for 1986 and 2010. Operational data obtained from the railroad were intended to be representative of annual average conditions, although it was recognized that activity varies considerably with seasonal demands and economic conditions. According to railroad officials, significant changes in yard operations are not anticipated in the foreseeable future.

f. Southern Pacific Transportation Company:  
Railroad Classification Yard

The SPTCo. railroad classification yard is located east of Beale Avenue between Sumner and Kentucky Streets in Bakersfield. Switching operations generally occur 24 hours per day and 7 days per week at both ends of the facility. Other noise sources associated with yard operations include idling switcher and road locomotives. The Wyle methodology was used to develop generalized CNEL contours around the facility for existing levels of yard operations, which are shown on the large scale map. Operational data were obtained from the railroad to represent annual average conditions, although it was recognized that activity varies considerably throughout the year due to seasonal demands and economic conditions. According to railroad officials, significant changes in yard operations are not anticipated in the foreseeable future.

g. United States Cold Storage

The United States Cold Storage facility is located at the southwest intersection of Stine Road and District Boulevard. The plant manufactures ice for retail sale and wholesale distribution. Noise sources associated with the plant include two compressors located on the roof of the building and truck traffic entering and leaving the loading dock area. During the summer and for most of the spring and fall both compressors run 24 hours a day. During the winter and for some of the spring and fall (depending on air temperature), the compressors run 2-3 days a week or only one compressor may operate. Truck traffic consists of 8 medium trucks and 2-3 heavy truck operations per day in the warmer months. In the colder months, operations are reduced to 2 medium and 1 heavy truck per day.

Truck arrivals and departures occur between 7 a.m. and 5 p.m. Noise measurements with both compressors operating at a distance of 140 feet from the approximate center of the plant resulted in a noise level of 64.1 dB(A)  $L_{eq}$ . The approximate location of the 60 dB CNEL contour based upon the above-described noise level and operational data are shown on the large scale map.

#### h. Coors Recycling Center

This facility is located on the south side of White Lane between Hughes Lane and South H Street. Noise generating activities consist of the unloading and crushing of aluminum cans using a hydraulic press. The press currently operates 5 days per week between 7:30 a.m. and 4:30 p.m. Operations may increase to 6 days per week depending upon the recycling needs of the community. Operations typically do not occur after 4:30 p.m., unless an equipment failure results in extended hours of operation to catch up. Noise measurements 400 feet from the facility were conducted on the morning of May 14, 1986, while the crusher was in operation. The measured  $L_{eq}$  at this location was 64.7 dB(A). Based upon the above-described noise level and operational data, a generalized 60 dB CNEL contour was prepared and is shown on the 400 scale maps.

#### NOISE SENSITIVE AREAS

The following noise sensitive land uses have been identified in the study area:

- Residential areas
- Schools
- Convalescent and acute care hospitals
- Parks and recreational areas

As suggested by the Office of Noise Control Guidelines, a community noise survey was conducted in March 1986 to document existing noise exposure in areas of the community containing noise sensitive land uses. The purpose of the community noise survey was to define the existing noise environment in areas of the community outside the  $L_{dn}$  60 dB contour where noise sensitive land uses are located; to provide a numerical check of noise levels determined by mathematical modeling techniques and to serve as a basis for establishing quantitative land use compatibility criteria and noise performance standards consistent with existing noise levels in the community.

Since the geographic scope of the study area is over 400 square miles, including both developed and undeveloped lands, noise measurements were conducted only in urbanized areas. Monitoring sites were selected on the basis of being a noise sensitive land use (residential, public park, school, hospital or church), and by generally being located away from existing noise sources, such as freeways. Of the 36 sites selected for sampling, 30 were surveyed intermittently during a 24-hour period and 6 were sampled continuously for 24 hours or more. Intermittent sampling was conducted four times during a 24-hour period, consisting of two samples during the daytime hours (7 a.m. to 7 p.m.), one sample during the evening

hours (7 p.m. to 10 p.m.), and one sample during the nighttime hours (10 p.m. to 7 a.m.). Each intermittent sample consisted of a 10-minute measurement period. Some of the sites (Site Nos. 9, 14, 16, 17, 19, 25, 26 and 36) were the same as those sampled by J.J. Van Houten and Associates, Inc., in 1982 as a part of the Noise Element for the City of Bakersfield. The purpose of resampling some of the Van Houten sites was to determine if any change in noise levels had occurred in the last four years. It should be noted that some of the Van Houten sites were located adjacent to traffic noise sources and therefore were not truly representative of ambient noise conditions in areas of the community removed from such sources.

The locations of the monitoring sites, measured noise levels and estimated CNEL values for the monitoring sites are summarized in Table VII-4. The locations of the monitoring sites are depicted on a map of the study area in Figure VII-2.

The results of the community noise survey indicate that the mean noise level as defined by CNEL in areas of the community where noise sensitive land uses are located is approximately 57 dB, ranging from 44 to 64 dB. Such levels are typical of suburban residential neighborhoods and are considered normally acceptable for all noise sensitive land uses according to criteria suggested by the Office of Noise Control Guidelines (Figure VII-3).

The median noise level ( $L_{50}$ ) is the criterion commonly used in noise ordinances or in other types of performance standards to assess the acceptability of noise sensitive land uses located in proximity to commercial or industrial noise sources. During the survey, median ( $L_{50}$ ) noise levels at the sites monitored continuously for 24 hours or more ranged from 38 to 49 dB(A) during the daytime hours (7 a.m. to 10 p.m.). During the nighttime hours (10 p.m. to 7 a.m.),  $L_{50}$  levels ranged from 24 to 48 dB(A).

Maintenance of desirable noise exposures for sensitive areas are addressed through consideration of sporadic noise normally associated with stationary land uses. Table VII-5 provides a method of determining land use compatibility for sensitive uses through the assignment of noise exceedence levels and time restrictions.



TABLE VII-4

Summary of Measured Noise Levels and Estimated Community  
Noise Equivalent Levels (CNEL) in  
Area Containing Noise Sensitive Land Uses

<u>Site #</u>	<u>Description</u>	<u>L</u> <u>D</u>	<u>L</u> <u>E</u>	<u>L</u> <u>N</u>	<u>L</u> <u>max</u>	<u>L</u> <u>min</u>	<u>Est.</u> <u>CNEL</u>
1	Collison St. & Carnation Ave., Lamont	49	45	42	61	37	51
2	Edison School & School Street, Edison	58	51	57	73	40	64
3	Fairfax School	49	48	45	62	40	53
4	Monica Street near Haupt Avenue	53	48	45	67	38	54
5	Pioneer Park	50	50	45	62	43	53
6	Harding School	54	51	42	72	36	54
7*	2617 Eissler Court	54	48	44	86	29	54
8	Boise St. near Cardinal Ave.	51	39	41	68	36	51
9**	Across from 3825 Green Hills Drive	46	43	39	60	35	48
0	Rudal Rd. near Lake Ming Road	54	33	34	68	42	55
1	North Highland Park	50	44	41	60	38	51
2*	3317 La Cresta Drive	56	57	41	88	25	56
3	Riverview Assembly of God Church	57	46	43	68	41	55
4	Longfellow School	55	51	44	68	42	55
5	Rafer Johnson School	51	47	46	65	44	54
6**	Eureka St. at Owens Street	54	53	50	63	45	58
7**	Mt. Vernon School	62	43	47	72	43	60
8	Texas Street near Hayes Street	62	48	45	79	43	60
9**	Louise Avenue near Michael Street	57	42	44	70	40	55
0	Greenfield Jr. H.S.	58	56	45	68	41	58
1	Rexland Acres Park	55	57	42	69	39	56
2	McKee School	56	52	50	74	42	58
3*	4004 Sugar Cane Avenue	51	46	45	81	30	54
4*	2213 Woolard Avenue	59	50	50	87	30	60
5	Marella Street near Montclair Street	60	55	50	72	45	60
6	Jastro Park	58	52	51	73	48	59
7*	6612 Hooper Avenue	50	50	40	77	21	51
8	Norris School	64	42	39	80	38	61
9	Across from 10400 Cave Avenue	54	50	40	77	21	51
0	Hesketh Dr. @ Carr Street	52	47	40	64	39	51
1	Across from 2113 Cantor Way	52	47	40	68	38	51
2*	2712 Stolle Ct.	57	43	46	94	26	55
3	Carvahlo Ct. @ LaCroix Ct.	59	46	41	73	42	57
4	McInnes Blvd. @ Nantes Way	43	41	33	50	31	44
5	Scottsburg St. @ Paisley Ct.	59	46	41	73	42	57
6**	College Heights School	54	51	46	67	44	55

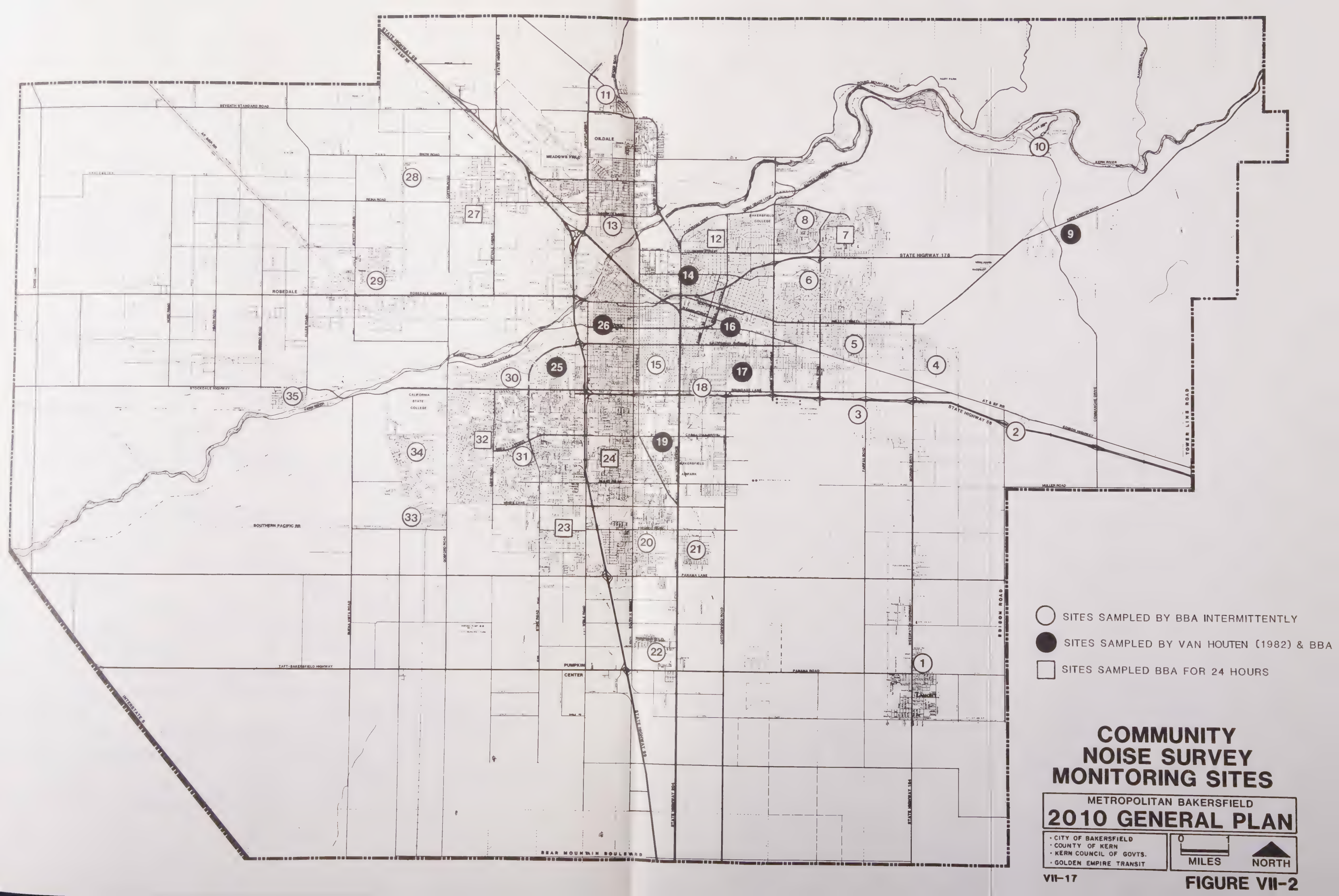
\* Sites sampled continuous for 24 hours.

\*\* Sites sampled by J.J. Van Houten in 1982.

Source: Brown-Buntin Associates







- SITES SAMPLED BY BBA INTERMITTENTLY
- SITES SAMPLED BY VAN HOUTEN (1982) & BBA
- SITES SAMPLED BBA FOR 24 HOURS

**COMMUNITY  
NOISE SURVEY  
MONITORING SITES**

**METROPOLITAN BAKERSFIELD  
2010 GENERAL PLAN**

• CITY OF BAKERSFIELD  
• COUNTY OF KERN  
• KERN COUNCIL OF GOVTS.  
• GOLDEN EMPIRE TRANSIT

0 1  
MILES NORTH





# LAND USE COMPATABILITY FOR COMMUNITY NOISE ENVIRONMENTS

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE Ldn OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL — LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES						
RESIDENTIAL — MULTI. FAMILY						
TRANSIENT LODGING — MOTELS, HOTELS						
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES						
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE						

## INTERPRETATION



### NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



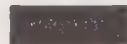
### CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



### NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



### CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

**FIGURE VII-3**

(Source: Office of Noise Control, California Department of Health)

78902





TABLE VII-5

## NOISE LEVEL PERFORMANCE STANDARDS\*

Category	Cumulative Number of minutes in any one-hour time period	Exterior Noise Level Standards	
		Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
1	30	55	50
2	15	60	55
3	5	65	60
4	1	70	65
5	0	75	70

\* Each of the noise level standards specified in this table shall be reduced by five (5) dB(A) for pure tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards should be applied at a residential or other noise-sensitive land use and not on the property of a noise-generating land use.

## SUMMARY

Existing and projected future traffic volumes, as well as noise sources from industry, trains, aircraft and recreational activities have the potential to increase noise to unacceptable levels in residential and other noise-sensitive areas of the plan area. Similarly, the expansion of residential uses near industry and airports may displace these activities if improper land use planning with regard to noise occurs. A series of policies and implementation measures have been prepared to address these issues.

## NOISE ISSUES

The following issues have been identified regarding noise:

- Noise exposure from conflicting land uses and transportation corridors.
- Maintenance of acceptable noise levels.

GOALS AND POLICIES

The following presents the goals and policies for noise in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1      Ensure that residents of the Bakersfield Metropolitan Area are protected from excessive noise and existing moderate levels of noise are maintained.
- 2      Protect the citizens of the planning area from the harmful effects of exposure to excessive noise, and protect the economic base of the area by preventing the encroachment of incompatible land uses near known noise-producing roadways, industries, railroads, airports and other sources.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1      Identify noise-impact areas exposed to existing or projected noise levels exceeding 65 dB CNEL (exterior) or the performance standards described in Table VII-5. The noise exposure contour maps on file at the City of Bakersfield and County of Kern indicate areas where existing and projected noise exposures exceed 65 dB CNEL (exterior) for the major noise sources identified (I-1).
- 2      Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into project design to reduce noise to the following levels (I-2, I-3, I-6, I-7):
  - a.    For noise attributable to sources which are preempted from local control, such as traffic on public roadways, railroads and airports, 65 db CNEL or less in outdoor activity areas and 45 dB CNEL or less within interior living spaces or other noise-sensitive interior spaces.
  - b.    For noise due to sources which are not preempted from local control, such as local industries or other stationary noise sources, 65 dB CNEL or less in outdoor activity areas, 45 dB CNEL or less within interior living spaces or other noise-sensitive interior spaces and the performance standards contained within Table VII-5.



- 3      Review discretionary industrial, commercial or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses. Additionally, the development of new noise-generating land uses which are not preempted from local noise regulation will be reviewed if resulting noise levels will exceed the performance standards contained within Table VII-5 in areas containing residential or other noise-sensitive land uses (I-3, I-6, I-7).
- 4      Require noise level criteria applied to land uses other than residential or other noise-sensitive uses to be consistent with the recommendations of the California Office of Noise Control (see Figure VII-3 (I-4)).
- 5      Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise (I-7).
- 6      Encourage interjurisdictional coordination and cooperation with regard to noise impact issues (I-8).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Noise Element. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Prepare noise contour maps which enable planning agencies, developers and the public to identify noise impacted areas on the land use map.
- 2 Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policy framework outlined in this element. In the appendix is a discussion of the techniques most commonly used for the mitigation of noise impacts. It is intended that these techniques be used to ascertain whether or not the noise mitigation measures suggested by development proposals are a reasonable application of noise mitigation techniques, and to determine whether suggested mitigation measures are likely to achieve compliance with the policies of the Noise Element.
- 3 Require development of proposed residential or other noise sensitive land uses in noise-impacted area to comply with the noise standards of 65 dB CNEL or less in outdoor activity areas and 45 dB CNEL or less within interior living spaces and the performance standards within VII-5.

Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB CNEL and interior noise levels in excess of 45 dB CNEL and so that impacts on noise sensitive uses shall not exceed the performance standards in Table VII-5.

At time of any discretionary approval, such as a request for zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:

- a) Be the responsibility of the applicant.
- b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.

- c) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
  - d) Include estimated noise levels in terms of CNEL and the standards of Table VII-1 (if applicable) for existing and projected future (10-20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
  - e) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
  - f) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.
- 4 Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.
  - 5 Enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code concerning the construction of new multiple-occupancy dwellings such as hotels, apartments, and condominiums.
  - 6 Investigate development and adoption of a community noise control ordinance to address noise complaints, and to provide local industry with performance standards for future development and equipment modifications. The noise exposure information developed during the community noise survey should be used as a guide in preparation of the ordinance. The ordinance should be consistent with the "Model Community Noise Control Ordinance" prepared by the California Office of Noise Control in 1977 with modifications made to reflect local concerns and conditions. (Appendix C includes a draft noise ordinance similar to the State's model.)
  - 7 Amend the city and county zoning ordinances as necessary to reflect the policies and programs of the Noise Element.
  - 8 Cooperate and discuss with all appropriate government agencies the planning documents governing noise-impact issues for consistency and coordination.







## CHAPTER VIII – SAFETY ELEMENT

### STATUTORY REQUIREMENTS

Government Code Section 54302(g) requires preparation of a Safety Element in city and county general plans as follows:

A safety element is necessary for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.

The Seismic Safety Element has been divided into three sections which address seismic safety, flooding and public safety.

## A. SEISMIC SAFETY

### OVERVIEW OF EXISTING CONDITIONS

Bakersfield is located near the eastern edge of the broad San Joaquin Valley, at the base of the Sierra Nevada. The valley is a large, northwest-trending trough (geosyncline) between the Sierra Nevada on the east and the Coast Range mountains on the west. The valley is filled with thick sediments eroded from the mountains on both sides. The gradual process of valley filling continues today as sediments are washed out of the mountains by rivers and streams and deposited on alluvial fans and flood plains.

The Kern River is the major hydrologic feature of the area, bringing water from Lake Isabella reservoir through the Kern River Canyon. In the Bakersfield area, the river has created the large Kern River fan, covering approximately 300 square miles of the valley. The Kern River flood plain is incised into the upper part of the fan, north of downtown Bakersfield, but spreads out across the broad, flat lower fan.

There are numerous geologic fractures in the earth's crust within the San Joaquin Valley. The most prominent is the San Andreas Fault. This fault is the boundary between the Pacific and North American plates, which are moving horizontally past each other at an average rate of 5 centimeters per year. Other types of fault systems occur in the Bakersfield region, as in most of California, due to the continual and historical convergence of these continental plates. Seismic hazards, including earthquakes, arise from colliding plates straining rocks beyond their elastic limits. The result is vibrations of the earth caused by the rock's rupture and sudden movement.

Potential seismic hazards existing in the planning area include strong ground shaking, fault rupture, liquefaction, earthquake induced landslides and potential inundation from the failure of Lake Isabella dam. Other geologic hazards in the planning area include flooding, landslides, and subsidence. A more complete discussion of the geologic and seismic history of the Bakersfield region is included in Appendix E.

In addressing the potential geologic and seismic hazards of the plan area, the siting and design of certain essential and critical facilities must be properly planned for if public health and safety are to be maintained following a disaster. Most critical and essential facilities in, or influencing, the Bakersfield metropolitan area (e.g. hospitals, schools, dams, nuclear power plants, etc.) are under state or federal regulation and control, and may be beyond the control of local jurisdictions. Other projects, including many critical facilities, are under local discretionary jurisdiction, and are therefore affected by the policies established in this plan.

## SEISMIC HAZARDS

The south end of the San Joaquin Valley is bordered by major, active fault systems, making Bakersfield a historically active seismic area of California. These fault systems are the San Andreas, Breckenridge, Kern Canyon, Garlock, and White Wolf faults (Figure VIII-1). A review of the geologic literature for the project area shows that the relationship of local faults and seismic activity is not completely understood. The availability of reliable data is greater for some parts of the study area than for others.

On July 21, 1952, the well-known Kern County Earthquakes began as a result of movement along the White Wolf Fault. The initial shock was a 7.7 magnitude shake with the epicenter near Wheeler Ridge. A second quake followed about a month later and was located closer to the city limits. The ground ruptured discontinuously along most of the length of the fault with maximum vertical displacement of about 3 feet. Extensive damage occurred to older buildings in Bakersfield, as well as utility outages and ground rupture due to liquefaction south of the city. Severe damage also occurred in the cities of Tehachapi and Arvin to the southeast of the study area.

## STRONG GROUND SHAKING

The principal seismic hazard affecting the planning area is the potential for strong ground shaking from any of the four major faults in the region (Figure VIII-1). There are numerous additional faults suspected to occur within the Bakersfield region which may or may not be active. Table VIII-1 indicates the known active faults within the region that are capable of causing structure damage within the planning area.

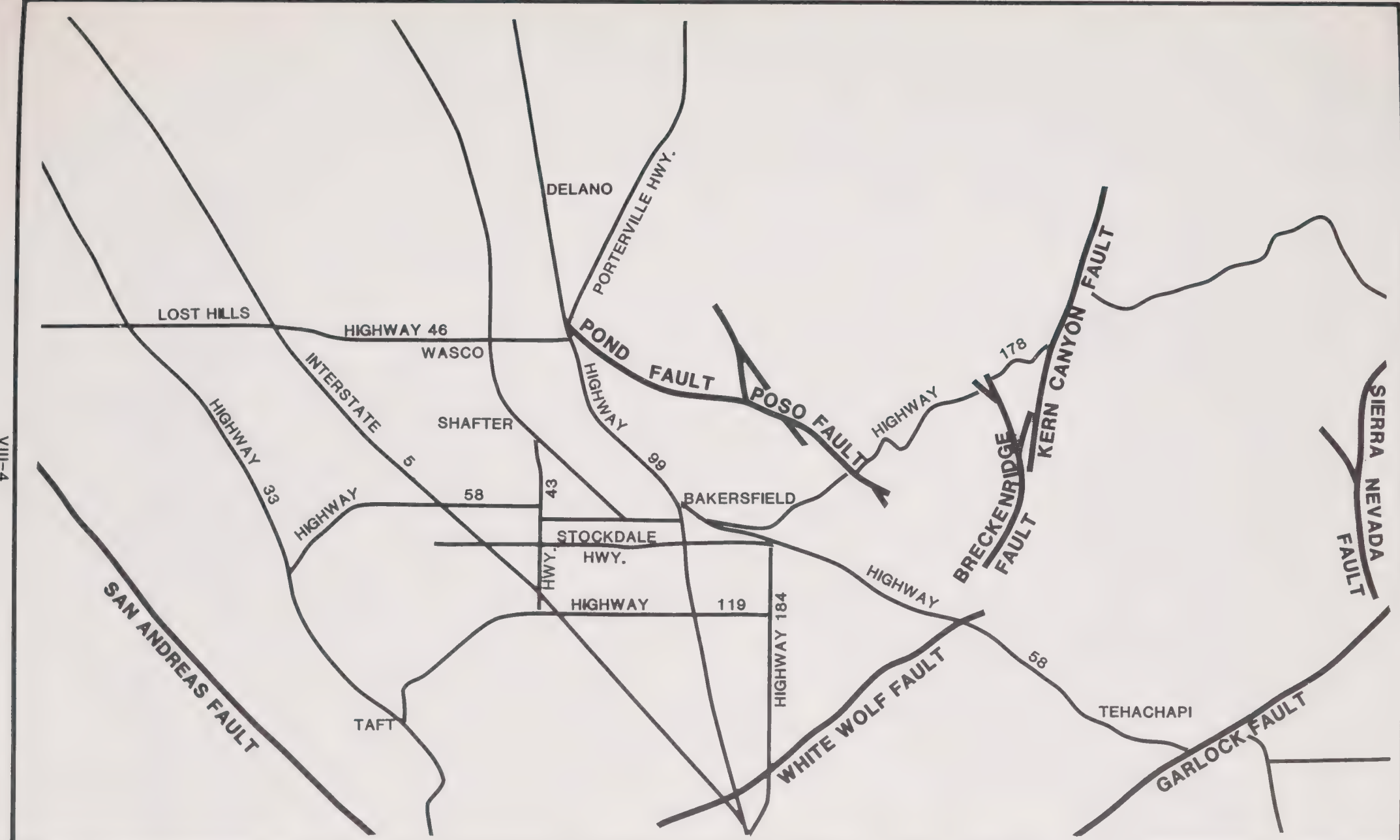
The most vulnerable structures in an earthquake are the unreinforced masonry buildings in Bakersfield, which were built before seismic codes were first instituted in the city and county. Some of these were damaged and subsequently demolished or repaired in the 1952 earthquake, whereas others were only slightly damaged, but may now be weakened and more vulnerable to future damage. Other building types that may pose substantial hazards in an earthquake include precast concrete tilt-up buildings, and predominantly multi-story buildings of non-ductile concrete frame and composite precast concrete construction of types.

Existing buildings or structures may be hazardous to life in the event of an earthquake because they exhibit any one of the following characteristics:

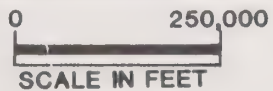
- a) exterior parapets and ornamentation that may fall on passers-by;
- b) exterior walls that are not anchored to the floors, roof or foundation;
- c) sheathing on roofs or floors incapable of withstanding lateral loads;







VIII-4



# MAJOR ACTIVE FAULTS

METROPOLITAN BAKERSFIELD	
2010 GENERAL PLAN	
<ul style="list-style-type: none"> <li>CITY OF BAKERSFIELD</li> <li>COUNTY OF KERN</li> <li>KERN COUNCIL OF GOVTS.</li> <li>GOLDEN EMPIRE TRANSIT</li> </ul>	<p>NORTH</p>

FIGURE VIII-1



TABLE VIII-1

## ACTIVE FAULTS CAPABLE OF CAUSING DAMAGE TO THE BAKERSFIELD AREA

<u>Causative Fault</u>	<u>Distance From Downtown Bakersfield (miles)</u>	<u>Maximum Credible Earthquake (Richter Magnitude)</u>	<u>Maximum Credible Bedrock Acceleration (g)</u>
San Andreas	38	8.0-8.3	0.2-0.25
Sierra Nevada	39	6.5-8.25	0.07-0.12
Garlock	35	7.5-8.0	0.17-0.18
Breckenridge-Kern Canyon	25	6.0-8.0	0.09-0.47
White Wolf	19	7.5-8.0	0.28-0.45
Pond Poso	8	7.0	0.31-0.48

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Sources: DEIR, Rio Bravo Annexation, July 1976  
 DEIR, 2800 Acre Groundwater Recharge Facility Along the Kern River for the City of Bakersfield, February, 1983  
 DEIR, State College Area General Plan Amendment, March, 1980  
 DEIR, Gannon-Wattenbarger General Plan Amendment, February, 1981



- d) large openings in walls that may cause damage from torsional forces; or,
- e) lack of an effective system to resist lateral forces.

As scientists and engineers gain more experience with seismic ground motion and the actual performance of buildings in earthquakes, seismic design standards are occasionally revised or upgraded. For example, revisions currently proposed for the Uniform Building Code would:

- ° upgrade the level of ground motion used in the seismic design of buildings;
- ° add site amplification factors based on local soils conditions; and
- ° improve the way ground motion is applied in detailed design.

These provisions are designed to reduce many of the structural problems identified as a result of major earthquakes affecting urban areas of Chile, Mexico and other locations.

New and proposed legislation is designed to reduce many of the structural problems identified as a result of recent earthquakes. For example, SB 547, enacted in 1986, required local jurisdictions to inventory existing unreinforced masonry buildings and develop structural hazards reduction programs for such buildings by January 1, 1990.

#### FAULT RUPTURE

A fault is defined as a fracture in the earth's crust forming a boundary between rock masses that have shifted. Fault rupture is a break in the ground's surface and associated deformation resulting from the movement of a fault. Surface rupture is a potential problem should strong earthquakes occur along the several faults in the project area.

The Alquist-Priolo Study Zones on Figure VIII-2 and shown in detail on the Alquist-Priolo Special Studies Zone Maps on file with the City of Bakersfield and Kern County have been designated by the State as areas where planning should consider the possibility of fault rupture along specific active or potentially active faults. These zones have been designated for portions of the southwestern project area to indicate the presence of faults which showed surface breakage during the 1952 White Wolf earthquake. The topographic quadrangles within the plan area which have Alquist-Priolo zonations are the Rio Bravo Ranch quad, the Oil Center quad, and Oildale quad and Edison quad. These zones mark the areas where faults are considered to have been active during the last 10,000 years and to have a relatively high potential for surface rupture. Special studies are required prior to building structures for human occupancy within Special Study Zones.

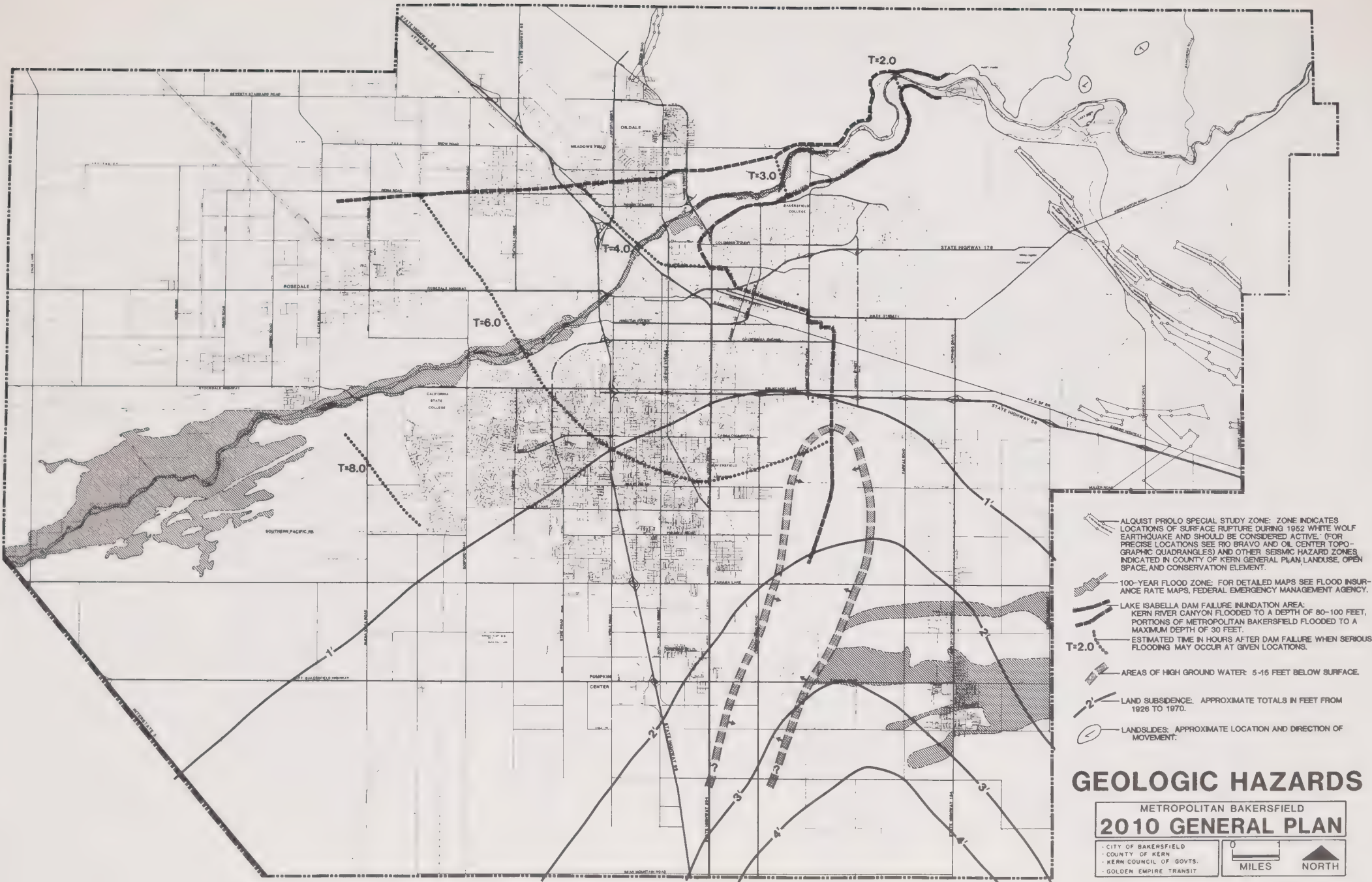


FIGURE VIII-2





Although these Special Study Zones have been designated for portions in the north and east of the project area, active faults may potentially exist outside these zones. For critical and important developments proposed outside of these zones, additional fault investigation may be necessary.

### LIQUEFACTION

Liquefaction is a transformation of a granular material from a solid state into a liquidfied state as a consequence of increased pore-water pressures. Areas of high groundwater are at a greater risk for liquefaction of soils during a major earthquake due to the settling of the foundations of homes, buildings, irrigation equipment, roads, and freeways.

High groundwater is known to exist at depths of 5 to 15 feet below the ground surface on portions of the Lamont quadrangle at R 28 E, T 30 S. This area, in south Bakersfield between about Brundage Lane and DiGiorgio Road (Figure VIII-2), could experience local areas of liquefaction during a strong earthquake, with attendant ground rupture and potential sinking or tilting of large buildings. Areas of high groundwater are rare elsewhere in the project area because the water table has been in a condition of subsidence due to the extraction of water for irrigation since the late 1880's.

Not all soil types are susceptible to liquefaction; site-specific studies, including soils tests to at least 30 feet deep, can be conducted to determine potential problems on a site-by-site basis. For new construction, most liquefaction problems can be resolved by special foundation design.

### DAM FAILURE INUNDATION

Isabella Dam, which is located about forty (40) miles northeast of Bakersfield, has a capacity to hold 570,000 acre feet of water. This dam, which is earth filled, is about 185 feet high and 1,725 feet long, and is built near a major earthquake fault.

If an earthquake were to occur in the vicinity, it could result in a break in the dam. This could, under certain conditions, cause the entire lake storage to be released, which would result in flooding 60 square miles of the Metropolitan Bakersfield and the surrounding areas of Oildale and Greenacres (see Dam Failure Inundation Area, Figure VIII-2). In the unlikely event of damage to the dam in an earthquake, approximately 150,000 persons would be affected (calculated from 1980 Census). The majority of people affected by these floodwaters (which would reach depths of up to 30 feet with velocities of two to five feet per second) would reside in the greater Bakersfield area. Nearly all the existing facilities would be either seriously affected or permanently damaged, and evacuation of the impacted area could be necessary.



The objective of the existing Flood Evacuation Plan for the City of Bakersfield (see Appendix E) is to provide for the protection of life and property through evacuation of areas that would be inundated. Figure VIII-2 and the table below indicate the estimated time in hours after dam failure when serious flooding would occur at given locations:

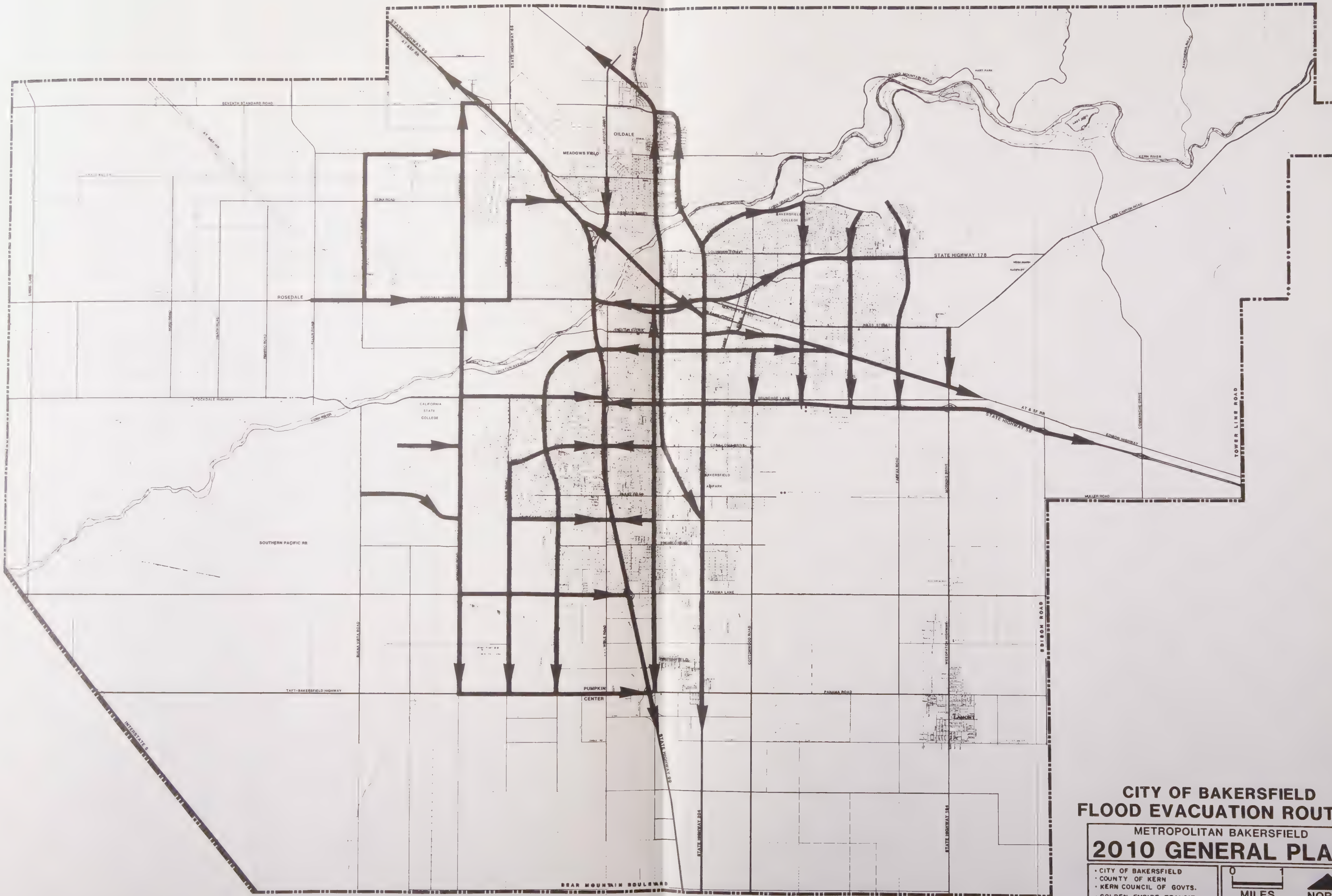
- 2 hours - Hart Park
- 3 hours - The Bluff area about Haley Street
- 4 hours - An arc along Golden State Hwy. to Flower Street
- 4.5 hours - The City Police Department
- 6 hours - An arc from the east end of Ming Avenue to Olive Drive and Coffee Road in Oildale
- 8 hours - An arc from Greenfield across Cal State to Seventh Standard Road

The major evacuation routes identified within the 2010 Plan area run in a southerly and easterly direction, except the areas north of 24th Street which will be in a northerly direction to Oildale. Figure VIII-3 indicates the evacuation routes identified in the City's Flood Evacuation Plan. Implementation measures of the Flood Evacuation Plan include:

- a) Initiating the call-out of all police personnel.
- b) Making evacuation announcements.
- c) Establishing evacuation routes and providing traffic control at major intersections along evacuation routes.
- d) Evacuating and coordinating the relocation of supplies and equipment from present buildings to ones outside of the flood zone.
- e) Establishing an emergency operations center.
- f) Performing a telephone evacuation notification of all critical facilities (schools, hospitals, convalescent homes, etc.).
- g) Providing security to critical locations such as food stores, gas stations, etc.
- h) Making arrangements for air reconnaissance and other support assistance as required.

#### EARTHQUAKE-INDUCED LANDSLIDES

A strong earthquake could trigger landslides or slope failures on steeper slopes in the foothills and along the Kern River Canyon and floodplain. The common types of landslides induced by earthquakes are bluff and streambank failures, rock falls and soil slips on steep slopes. Deep-seated landslides are not necessarily reactivated in an earthquake.



**CITY OF BAKERSFIELD  
FLOOD EVACUATION ROUTES**

METROPOLITAN BAKERSFIELD  
**2010 GENERAL PLAN**

- CITY OF BAKERSFIELD
- COUNTY OF KERN
- KERN COUNCIL OF GOVTS.
- GOLDEN EMPIRE TRANSIT

0 1  
MILES NORTH





## OTHER GEOLOGIC HAZARDS

## FLOODING

Non-seismic-related flood hazards to the general plan area relate primarily to the Kern River floodplain. For a complete discussion of the magnitude of this flood hazard, consult the Flood Management Section (Chapter VIII B.) of the plan. Areas of potential flooding in the region have been delineated by the Federal Emergency Management Agency's National Flood Insurance Program. Areas subjected to 100 year flood hazard are shown in Figure VIII-2.

## LANDSLIDES

Landslides or slope failures are rare in the plan area due to relatively flat lands over the majority of the project area. Slopes subject to failure within the Bakersfield area are predominantly found along the river terraces, bluffs and foothills to the northeast and east of the city. Investigations to date have documented two landslides in the foothills northeast of the city, as shown in Figure VIII-2. Only limited exposure to landslides is predicted for the urban areas of Bakersfield, due to constraints on slope-side development. Some construction, however, on sloping terrain could inadvertently trigger landslides unless appropriate precautions are utilized in a site-specific basis.

## LAND SUBSIDENCE

Land subsidence is the gradual, local settling or sinking of the earth's surface with little or no horizontal motion. Subsidence is normally the result of gas, oil or water extraction, hydrocompaction, or peat oxidation, and not the result of landslide or ground failure. The southern part of the planning area has been undergoing gradual land subsidence (Figure VIII-2), with up to four feet of subsidence over a 40-year period. Although subsidence is not a significant hazard, damage to wells, foundations and underground utilities may occur.

SEISMIC SAFETY ISSUES

The following issues have been identified regarding geologic and seismic hazards:

- The planning area is susceptible to moderate to extreme ground shaking from a number of seismic sources in the region.
- The eastern part of the planning area contains an active fault, the White Wolf fault, which has been designated by the state as an Alquist-Priolo Special Studies Zone.
- An area of high ground water in the southern part of the planning area may be subject to liquefaction in an earthquake.



- More information is needed on the geographic extent of high groundwater.
- In the event of an earthquake, unacceptable risks to public health and safety can occur where sufficient standards are not incorporated into the design of critical facilities.
- Many buildings in the planning area, especially those constructed prior to the city's first seismic codes, could suffer severe damage or collapse in the event of any earthquake that produces moderate to strong ground motion in the planning area.
- Damage to Isabella Dam could require the evacuation of a substantial portion of the planning area. If communications are intact, the city may have from two to six hours to complete the evacuation.
- Effective response to a disaster or a warning of disaster is essential to life-saving and the reduction of subsequent property damage.
- In a major earthquake, mutual aid sources in adjacent jurisdictions may be fully committed to their own needs, and there may be substantial delays in the transport of assistance from more distant locations.
- Effective disaster preparedness will require the concerted efforts of city agencies, residents and the business community.
- Effective implementation of seismic policies will reduce the magnitude of damage in an earthquake, but a variety of damage should still be expected.
- Ultimate post-earthquake survival will depend not only on the effectiveness of hazard mitigation and disaster response programs, but also on how quickly and how well the community is re-built after an earthquake.
- A damaging earthquake presents both problems and opportunities in urban land use management. For example, if there are larger areas of substantial damage, there may be a need for short term redevelopment. This would also provide opportunities for up-grading through such measures as revised street and traffic patterns, parking, architectural and landscape design, and general land use compatibility. It would also provide an opportunity to mitigate specific earthquake hazards discovered in the earthquake.

GOALS AND POLICIES

The following presents the goals and policies for seismic safety in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Substantially reduce the level of death, injury, property damage, economic and social dislocation and disruption of vital services that would result from earthquake damage.
- 2 Ensure the availability and effective response of emergency services following an earthquake.
- 3 Prepare the planning area for effective response to, and rapid, beneficial recovery from, an earthquake.
- 4 Prevent loss of life from the failure of critical facilities in an earthquake and ensure the continued functioning of essential facilities following a disaster.
- 5 Protect essential lifelines and prevent casualties and major social and economic disruption due to liquefaction in an earthquake.
- 6 Provide a continuously improving data base and reference source for evaluation of seismic and geologic hazards.
- 7 Protect land uses from the risk of dam failure inundation including the assurances that: the functional capabilities of essential facilities are available in the event of a flood; hazardous materials\* are not released; effective measures for mitigation of dam failure inundation are incorporated into the design of critical facilities; and the rapid and orderly evacuation of populations in the inundation area will occur.

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\* Hazardous materials are defined as injurious substances, including pesticides, herbicides, toxic metals and chemicals, liquidified natural gas, explosives, volatile chemicals, and nuclear fuels.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions. For ease of implementation, policies have been arranged with respect to seismic topics they influence.

## CRITICAL FACILITIES

- 1      Ensure that earthquake survival and efficient post-disaster functions are a primary objective in the siting, design and construction standards for discretionary essential facilities or for expansion of such existing facilities (I-1 through I-11).
- 2      Require that the siting and development of critical facilities under discretionary approval by the City Council and Board of Supervisors be supported by documentation of thorough hazard investigations relating to site selection, pre-construction site investigations and application of the most current professional standards for seismic design (I-1, I-2, I-10, I-13, I-26, I-29).
- 3      Require the location of all critical facilities to be catalogued and mapped (I-26).
- 4      Encourage existing critical facilities with significant seismic vulnerabilities to be upgraded or relocated as appropriate (I-4).
- 5      Encourage critical facilities in dam inundation areas to develop and maintain plans for safe shut-down and efficient evacuation from their facilities, as appropriate to the degree of flood hazard for each facility (I-27, I-32).
- 6      Incorporate planning for incidents affecting critical facilities into contingency plans for disaster response and recovery (I-32).

## HAZARDOUS BUILDINGS

- 7      Inventory all unreinforced masonry buildings in the planning area for conformance with state legislation and guidelines (i.e. SB 547, enacted in 1986 (I-5)).
- 8      Comply with Chapter 12.2 (8875), Division 1 of Title 2 of the Government Code which requires local jurisdictions to develop structural hazard reduction programs by January 1, 1990, for the upgrading of seismically hazardous buildings (I-5 through I-8).
- 9      Require seismic review of other potentially hazardous buildings upon any change in their use or occupancy status (I-9).

- 10 Adopt and maintain high standards for seismic performance of buildings, through prompt adoption and careful enforcement of the most current seismic standards of the Uniform Building Code (I-1, I-2, I-3, I-5, I-7, I-10 through I-12).

#### FAULT RUPTURE

- 11 Prohibit development designed for human occupancy within 50 feet of a known active fault and prohibit any building from being placed astride an active fault (I-14, I-15).
- 12 Require site-specific studies to locate and characterize specific fault traces within an Alquist-Priolo Fault Studies Zone for all construction designed for human occupancy (I-13).
- 13 Design significant lifeline installations such as highways, utilities and petrochemical pipelines which cross an active fault, to accommodate potential fault movement without prolonged disruption of an essential service or creating threat to health and safety (I-16).

#### LIQUEFACTION

- 14 Determine the liquefaction potential at sites in areas of high groundwater prior to development and determine specific mitigation to be incorporated into the foundation design, as necessary to prevent or reduce damage from liquefaction in an earthquake (I-17 through I-19).
- 15 Route major lifeline installations around potential liquefaction areas or otherwise protect them against significant damage from liquefaction in an earthquake (I-20).

#### INFORMATION

- 16 Compile information on areas of potential hazards and field information developed as part of CEQA investigations and geologic reports and keep geologic reviews and policy development current and accessible for use in report preparation (I-21, I-22, I-23, I-25).
- 17 Encourage and support local, state and federal research program for delineation of geologic and seismic hazards so that acceptable risk may be continually reevaluated and kept current with state-of-the-art information and contemporary values (I-24).
- 18 Require known geologic and seismic hazards within the area of a proposed subdivision to be referenced on the final subdivision map (I-25).



## DAM FAILURE INUNDATION RISK

- 19 Design discretionary critical facilities located within the potential inundation area for dam failure in order to: mitigate the effects of inundation on the facility; promote orderly shut-down and evacuation (as appropriate); and, prevent on-site hazards from affecting building occupants and the surrounding communities in the event of dam failure (I-27).
- 20 Design discretionary facilities in the potential dam inundation area used for the manufacture, storage or use of hazardous materials to prevent on-site hazards from affecting surrounding communities in the event of inundation (I-28).
- 21 Require emergency response plans for the planning area to include specific procedures for the sequential and orderly evacuation of the potential dam inundation area (I-29).
- 22 Encourage critical and high-occupancy facilities as well as facilities for elderly, handicapped and other special care occupants located in the potential inundation area below the dam to develop and maintain plans for the orderly evacuation of their occupants (I-36).

## EMERGENCY MANAGEMENT

- 23 Require local agencies to coordinate with the business community to reduce seismic hazards (I-30 through I-37).
- 24 Increase the public awareness of seismic hazards in residents of the city and county (I-36)
- 25 Require the city's and county's emergency preparedness programs to have a three-fold emphasis: hazard mitigation, disaster response and self-sufficiency of residents, business and industry (I-1 through I-37).
- 26 Require the emergency management program to include effective plans for disaster/earthquake response, training of responsible personnel, mutual aid agreements for all appropriate functions, and exercises conducted at least annually to test and evaluate plan capabilities (I-30 through I-34).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Safety Element affecting seismic safety. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Amend city and county building and zoning ordinances to incorporate specific standards for siting and seismic design of critical facilities.
- 2 Require detailed site studies for ground shaking characteristics, liquefaction potential, dam failure inundation and flooding potential, and fault rupture potential, as background to the design process for critical facilities under city and county discretionary approval.
- 3 Require structures that are within the plan area and are subject to Building Department review to adhere to the most current seismic standards adopted as part of the Uniform Building Code.
- 4 Review existing critical facilities for any significant siting, design or construction problems that would make them vulnerable in an earthquake. The findings shall be incorporated into emergency operations plans as well as addressed in longer-term programs of facilities upgrading or relocation.
- 5 Conduct (Department of Building Inspection) an inventory of all unreinforced masonry buildings in the planning area, including all information required by applicable state legislation and guidelines.
- 6 Require notification to owners of potentially hazardous buildings, pursuant to state legislation, and publication or availability of the list of such buildings for public information.
- 7 Adopt a program for seismic upgrading of unreinforced masonry buildings by January 1, 1990, tailored to the local conditions in the planning area. The ordinance or program shall consider:
  - ° Guidelines of the California Seismic Safety Commission and model ordinances such as Division 88 of the Los Angeles Building Code.
  - ° Phased enforcement, keyed to the importance and occupancy level of unreinforced masonry buildings, with progressive enforcement over a 20-year time span.

- Requirements for anchoring walls to diaphragms of unreinforced masonry buildings in an early phase of enforcement, to provide an initial level of strengthening to compensate for the long time span of the complete program.
- 8 Consider a special recognition program for buildings that have been reinforced under the hazardous buildings ordinance, such as a plaque or certificate that can be displayed on the building.
  - 9 Maintain cognizance of other types of potentially hazardous buildings and programs developed for the reduction of seismic hazards. For example, concrete tilt up and concrete frame buildings built before enactment of the current seismic codes should be required to meet basic seismic standards before a change in use or occupancy level is approved, or when significant alteration or repair is proposed.
  - 10 Develop appropriate criteria and procedures for third-party review of the seismic design of critical facilities.
  - 11 Review the current code enforcement procedures for concrete tilt-up and composite pre-stressed concrete construction for consistency with effective principles of seismic design, and revised as appropriate to maintain seismic integrity of new construction.
  - 12 Require seismic review prior to major addition, renovation or increase in occupancy of buildings.
  - 13 Detailed geologic investigations shall be conducted, in conformance with guidelines of the California Division of Mines and Geology, for all construction designed for human occupancy in an Alquist-Priolo Fault Study Zone.
  - 14 Revise city and county zoning and building codes to prohibit construction of buildings for human occupancy within 50 feet of the trace of an active fault. For Critical Facilities the set-back shall be at least 300 feet.
  - 15 Reflect the location of active faults in zoning and subdivision approvals, through low-density zoning designations and through locations of lot lines and public ways to allow adequate flexibility in placement of buildings such that active fault traces can be avoided.
  - 16 Require plans and permits for installation of major lifeline components such as for highways, utilities and petroleum or chemical pipelines to incorporate design features to accommodate potential fault movement in areas of active faults without prolonged disruption of an essential service or threat to health and safety.



- 17 Require liquefaction investigations in all areas of high groundwater potential and appropriate foundation designs to mitigate potential damage to buildings on sites with liquefaction potential.
- 18 Develop specific guidelines for the collection of data for determination of liquefaction potential at a site.
- 19 Require the proper sealing of any abandoned wells and the removal of abandoned underground irrigation and drainage systems to be accomplished prior to subdivision approval in areas of high groundwater, to prevent the uncontrolled flow of water from adversely affecting long-term efforts for liquefaction and groundwater mitigation.
- 20 Route major lifeline components such as for highways, utilities and petroleum or chemical pipelines around areas of high groundwater wherever possible. Where they must cross an area of high groundwater, plans and permits shall require design features to accommodate extensive ground rupture without prolonged disruption of an essential service or threat to health and safety.
- 21 Develop and maintain map sheets at an appropriate scale, such as 1"=2000', showing the location of all geologic hazards, including: active faults, Alquist-Priolo Special Study Zones, 100-year flood hazard, extent of projected dam failure inundation and time arcs, depth of inundation, land subsidence, slope failure and earthquake-induced landslides, high groundwater and liquefaction potential.
- 22 Compile information on areas of potential hazard. Field information developed as part of CEQA investigations and geologic reports by the city/county geologists should be kept current and accessible for use in report preparation, geologic reviews and policy development.
- 23 Update the County's Seismic Hazards Atlas as necessary.
- 24 Encourage and support local, state and federal research program for delineation of geologic and seismic hazards so that acceptable risk may be continually re-evaluated and kept current with state-of-the-art information and contemporary values.
- 25 Require known geologic and seismic hazards within the area of a proposed subdivision to be referenced on the final subdivision map.
- 26 Require the City and County Planning Departments to prepare and maintain a map of all essential facilities and other critical facilities within the planning area.



- 27 Develop procedures for the discretionary review of critical facilities proposed in an area of potential dam inundation. Approvals shall include requirements that emergency shut-down and facility evacuation plans be developed, maintained and exercised for each facility, and the potential effects of inundation on essential facility functions and the safety of occupants and the community in general are addressed.
- 28 Facilities used for the manufacture, storage or use of hazardous materials shall comply with the uniform fire code, with requirements for siting or design to prevent on-site hazards from affecting surrounding communities in the event of inundation.
- 29 Incorporate specific plans for the sequential and orderly evacuation of the potential dam inundation area into emergency response plans.
- 30 Maintain effective disaster response and earthquake response plans and update on a regular basis.
- 31 Require the city and county to maintain effective mutual aid agreements for fire, police, medical response, emergency morgue, mass care, heavy rescue, and other functions as appropriate.
- 32 Require emergency response plans and disaster exercise scenarios to include contingencies for the problems listed below; earthquake response exercises shall be conducted at least once a year.
  - ° Rupture of any active fault within 40 miles of Bakersfield.
  - ° Collapse of 50 buildings or more, including some mid-rise structures, some essential facilities and numerous unreinforced masonry buildings.
  - ° Ground rupture and attendant property damage due to pockets of liquefaction in areas of high groundwater.
  - ° Complete evacuation of the potential inundation area.
  - ° Many aftershocks, continuing for many weeks or months.
- 33 Require disaster response plans to include adequate capabilities for search and rescue, medical responses, interim morgue, emergency shelter, traffic and utility impacts, debris removal and disposal, as well as hazardous materials response.
- 34 Require disaster response plans to include procedures for traffic control and security of damaged areas.

- 35 Seek public participation in the development of hazard mitigation and disaster recovery programs.
- 36 Require public education and preparedness to be a major, continuing component of the emergency preparedness program. It should include, at a minimum:
  - ° The existence and approximate locations of local faults, liquefaction susceptibility areas, and the dam evacuation area, and the procedures that have been developed to deal with them.
  - ° The potential for strong ground shaking in the area, and means of strengthening buildings and protecting furnishings, equipment and other building contents from damage.
  - ° The need for business and residents to be self-sufficient for several days following an earthquake, including food, water, sanitation, medical assistance, and limited fire fighting.
  - ° The provision for the orderly evacuation of elderly, handicapped and other special-care persons.
  - ° What people and businesses should do to help themselves before, during and after earthquakes.
- 37 Enlist the cooperation of the business community for public education, preparedness of business and industry, and mutual assistance.

## B. FLOODING

### REVIEW OF EXISTING CONDITIONS AND ISSUES

Flooding within the planning area originates from the Kern River watershed which lies in Kern and Tulare Counties at the southern end of the Sierras, and from the Caliente Creek stream group which drains the west slopes of the Tehachapi mountains. Some smaller areas are subject to flooding from localized watersheds.

The most severe flooding problems on the Kern River near Bakersfield have resulted from high-intensity winter rainstorms over a large portion of the basin, which generally occur from November through April. Snow melt floods, which usually occur in the late spring and early summer, generally have a longer period of runoff and also a lower peak than rain floods, as a result, these spring storms have rarely caused significant damage.

From December 2, through 7, 1966, the most severe rainstorm on record occurred in the southern San Joaquin Valley. The Army Corps of Engineers estimated that if Isabella Reservoir had not been built, flow on the Kern River six miles upstream of Bakersfield would have been approximately 80,000 cubic feet per second (cfs). Actual flow was only 9,300 cfs at Bakersfield and consisted primarily of inflow from tributary streams entering the river between Lake Isabella Dam and the City of Bakersfield.

In the past 40 years, seven major floods along Caliente Creek have occurred. Floods in September 1932; April 1943; March 1944; October 1945; December 1966; February 1969; and March 1983 have been investigated by the Kern County Water Agency, and the Army Corps of Engineers. The frequency and the magnitude of these floods, coupled with the existing development in the floodplain have caused extensive flood damage to the Lamont/Arvin area. A flood control dam on the Caliente Creek is under consideration by the Army Corps of Engineers.

### PLANNING TOOLS FOR FLOOD HAZARD MITIGATION

The City of Bakersfield entered the Regular Phase of the National Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA) on May 1, 1985. The County of Kern followed on September 29, 1986. By adopting flood damage prevention ordinances to regulate development in special flood hazard areas, private property owners in participating communities are allowed to purchase affordable flood insurance through the NFIP, while the community retains its eligibility to receive certain federally backed monies, and disaster relief funds.

Both the City of Bakersfield and the County of Kern participate in the state-mandated Kern River Designated Floodway program, which is administered by the California Department of Water Resources Reclamation Board. The Kern River Designated Floodway Program provides development criteria and issues permits for development within the limits of the Kern River Designated Floodway.

Floodplain mapping has been performed under the NFIP to delineate the special flood hazard areas. The City of Bakersfield Public Works Department and the Kern County Department of Planning and Development Services have the official Flood Insurance Rate Maps (FIRMS) and Flood Boundary Floodway Maps (FBFM) which show the extent of the floodplains. In addition, the communities are empowered to develop and use improved floodplain information. FEMA has accepted the California Department of Water Resources Reclamation Board Kern River designated floodway from Interstate 5 to the mouth of the Kern River canyon, because the DWR study is based upon the 100 year peak discharge of 15,000 cfs, which exceeds the Kern River Flood Insurance Study flow of 10,200 cfs.

FEMA identifies areas of floodway, floodway fringe, and non-regulatory floodplain.

Floodway--The channel of a river and adjacent land areas required to pass the 100-year discharge without cumulatively increasing the water surface elevation at any point more than one-foot above the prefloodway condition.

Floodway Fringe--The area of the 100 year floodplain outside of the Floodway.

Non-regulatory floodplain--All other areas outside of the 100-year floodplain. Protection provisions of the NFIP do not apply.

Both the city and county have adopted general plan designations which identify allowable uses in the floodplain. Local zoning ordinances more closely define known areas to have potential for flooding.

In July 1985, both the city and county adopted the Kern River Plan Element (KRPE) as a part of their general plans. The KRPE establishes provisions for development along the Kern River, and specific policies for floodplain management.

The Flood Damage Prevention Ordinance provides criteria for development within all floodplains, including prohibiting encroachments into a floodway, and requiring protection and/or elevation of construction within a floodway fringe.

With the construction of Isabella Dam, hazards from a 100-year flood have been substantially reduced for the Oildale/Bakersfield metropolitan area. New development within the 100 year floodplain will be required to be flood protected. The Caliente Creek floodplain will continue to experience flooding until the proposed Caliente Creek Dam can be built.

#### FLOODING ISSUES

- ° Protection of the planning area from flooding.
- ° Minimizing loss due to flooding.



GOALS AND POLICIES

The following presents the goals and policies for floodplain management in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1 Minimize hazards to planning area residents resulting from flooding.
- 2 Reduce the risk of flooding to land uses.
- 3 Maintain adequate flood flow capacity in the Kern River channel to prevent flooding from anticipated 100 year design flood flows.
- 4 Regulate flood flow on Caliente Creek to mitigate flood hazard in the Lamont area.

POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Develop specific standards which apply to development located in flood hazard areas, as defined by Federal Flood Insurance maps and most recent information as adopted by the responsible agency (I-1, I-2).
- 2 Maintain adequate levees along the Kern River channel throughout the planning area (I-4).
- 3 Prevent urban development encroachment which would impede flood flows in the Kern River designated floodway (I-3, I-5).
- 4 In accordance with the Kern River Channel Maintenance Plan, remove sand and excessive plant growth from the Kern River channel as required to maintain channel capacity through the planning area (I-6).
- 5 Construct an upstream dam of adequate capacity on Caliente Creek and obtain funding for planning, design and construction. (I-7).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Safety Element affecting flooding. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1      Develop appropriate procedures for discretionary approval of all critical facilities in an area of identified flood hazard, with requirements for mitigation of the potential effects of flooding on essential facility functions and the safety of occupants and the community in general.
- 2      Develop procedures for the review of proposed facilities which use, manufacture or store hazardous materials proposed in areas of identified flood hazard.
- 3      Review current zoning designations, street width and traffic flow patterns in and adjacent to areas of identified flood hazard for compatibility with orderly evacuation, and identify and implement appropriate change in immediate and long-term policies and programs.
- 4      Support the continued activities of the Kern River Levee District in maintaining the Kern River levees.
- 5      Comply with the regulations and guidelines contained in the City/County adopted Kern River Plan Element of the City and County General Plans, and the zoning and floodplain management regulations which implement the Plan.
- 6      Implement the Kern River Channel Maintenance Program.
- 7      Obtain the required Federal funding and authorization for completion of planning, design and construction of a flood control dam on Caliente Creek.

## C. PUBLIC SAFETY

### OVERVIEW OF EXISTING CONDITIONS AND ISSUES

Public safety services for the metropolitan area are provided by the Bakersfield Police Department, the Kern County Sheriff's Department, the Bakersfield Fire Department and Kern County Fire Services. A brief description of each follows.

#### CITY OF BAKERSFIELD POLICE DEPARTMENT

Thirteen patrol districts operate from the Truxtun Avenue headquarters and cover an 83-square mile area with a January, 1989 estimated population of 161,750 residents. Police services are not divided into precincts or substations; however, office space is available to the department, and is intermittently used, at outlying fire stations.

The police department is organized into three divisions under the Chief of Police, each managed by an Assistant Chief. The Administrative Division includes personnel, training, internal affairs, vice, records, business management and crime prevention. The Investigations Division handles follow-up investigation of crimes, the crime lab, warrants and property. The Operations Division encompasses patrol, traffic, reserves and the communications center.

The Police Department provides full law enforcement service to all areas within the city limits. Primary response to calls for service, and preventive patrol, are provided by uniformed officers and community service technicians in marked police vehicles.

The police headquarters building is designed for an additional third and fourth floor. Although actual expansion is not scheduled for several years, additional parking facilities are being obtained.

The 13 patrol districts are manned on a 24-hour basis, with a 1985 average response time of 7.24 minutes for emergency calls. Follow-up investigation is undertaken on crimes having a solvability factor (evidence or witness that might lead to a conclusion) resulting in an annual clearance rate of 31 percent in 1985 for Part I\* crimes. Traffic and parking control functions are provided, with minimal investigation on property damage traffic accidents, and complete investigations on all injury, fatal, intoxication and hit-and-run accidents.

As the population and geographic area of the city increases, the demand for police service will similarly increase. At present, the only staffing standard applied to the Police Department is a ratio of officers per thousand population in cities of comparable size. For many years, the City of Bakersfield utilized a ratio of 1.65 officers per thousand residents, but more recently has reduced this ratio to 1.5 because other cities of comparable size averaged this ratio.

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\* Part I offenses include those crimes which are required to be reported to the F.B.I.

Within the city, the police handle both crimes and traffic accidents; in the county, the California Highway Patrol is responsible for traffic accidents and violations, while the Kern County Sheriff's Office is responsible for criminal matters.

Problems exist with regard to police services to residents in the unincorporated portions of Bakersfield. Confusion is sometimes evident when calls for police services are delayed while establishing jurisdictional responsibilities, and residents are understandably annoyed when transferred to another agency. However, city police patrol units encountering a police problem within an unincorporated area will take the necessary action to stabilize the situation prior to the arrival of sheriff or Highway Patrol officers.

#### KERN COUNTY SHERIFF'S DEPARTMENT

The Kern County Sheriff's Department operates the Bakersfield metropolitan precinct from the Bakersfield headquarters located within the Kern County Administration and Courts Building at 1415 Truxtun Avenue. The Lamont precinct operates from the Lamont Substation at 8301 Segrue Road, Lamont.

Detention facilities include the Central Receiving Facility at the County Administration and Courts Building and the Lerdo Facility on Lerdo Highway approximately 12 miles north of downtown Bakersfield.

Eight patrol beats operate within the metropolitan precinct with one patrol beat in the Lamont precinct. The combined service area is approximately 333 square miles with an estimated population of 162,790. Dispatch and 911 services for the metro and Lamont precincts are handled from the central communications center located at 2601 Panorama Drive.

Within the metropolitan precinct, police services are divided into three divisions: (a) the Administrative Services Division includes personnel services, crime prevention, internal affairs, personnel training and planning and research; (b) the Detective Division is responsible for follow-up investigations of criminal offenses; and (c) the Patrol Division responds to calls for police services and performs preventive patrol within the precinct area. In the Lamont Substation the Divisions are Detective and Patrol Services.

Primary response to calls for service and preventive patrol is provided by the uniformed officers using marked sheriff vehicles.

The county uses a staffing standard of 1.15 officers per thousand population (excluding corrections and civil). This is a county-wide average and will vary depending on specific location. As an example, a small rural substation will significantly exceed this standard. The Bakersfield metropolitan precinct has a 1.074 ratio and Lamont 1.176 (1984).



Although the metropolitan precinct operates together with the Bakersfield Police Department in patrolling the Bakersfield urban area, the staffing levels are tied to the population within each jurisdiction. Sheriff's patrol units traveling through the city will respond to observed police problems and call the city police for follow-up.

#### ANALYSIS OF POLICE AND SHERIFF SERVICES

To the extent that implementation of the general plan may effect a reduction in the complexity of jurisdictional boundaries, the provision of police/sheriff services would be simplified. General plan policy implementation which reduces sprawl or leapfrog development would be helpful in effecting more efficient public safety services.

Although both police agencies have the capacity to meet public safety needs, there is some difficulty at times as to jurisdictional responsibilities due to the irregular municipal boundaries. Emergency calls are dispatched in accord with jurisdictional boundaries which determine which agency will respond. The Sheriff's Computer Aided Dispatch System identifies calls for service by city or county jurisdiction.

Mutual assistance is available and a mutual aid agreement has been approved by the City of Bakersfield and the County of Kern. Other formal agreements for specific services include joint participation in the Kern County Criminal Justice Information System and the Kern County Emergency Incident Coordination and Interagency Agreement.

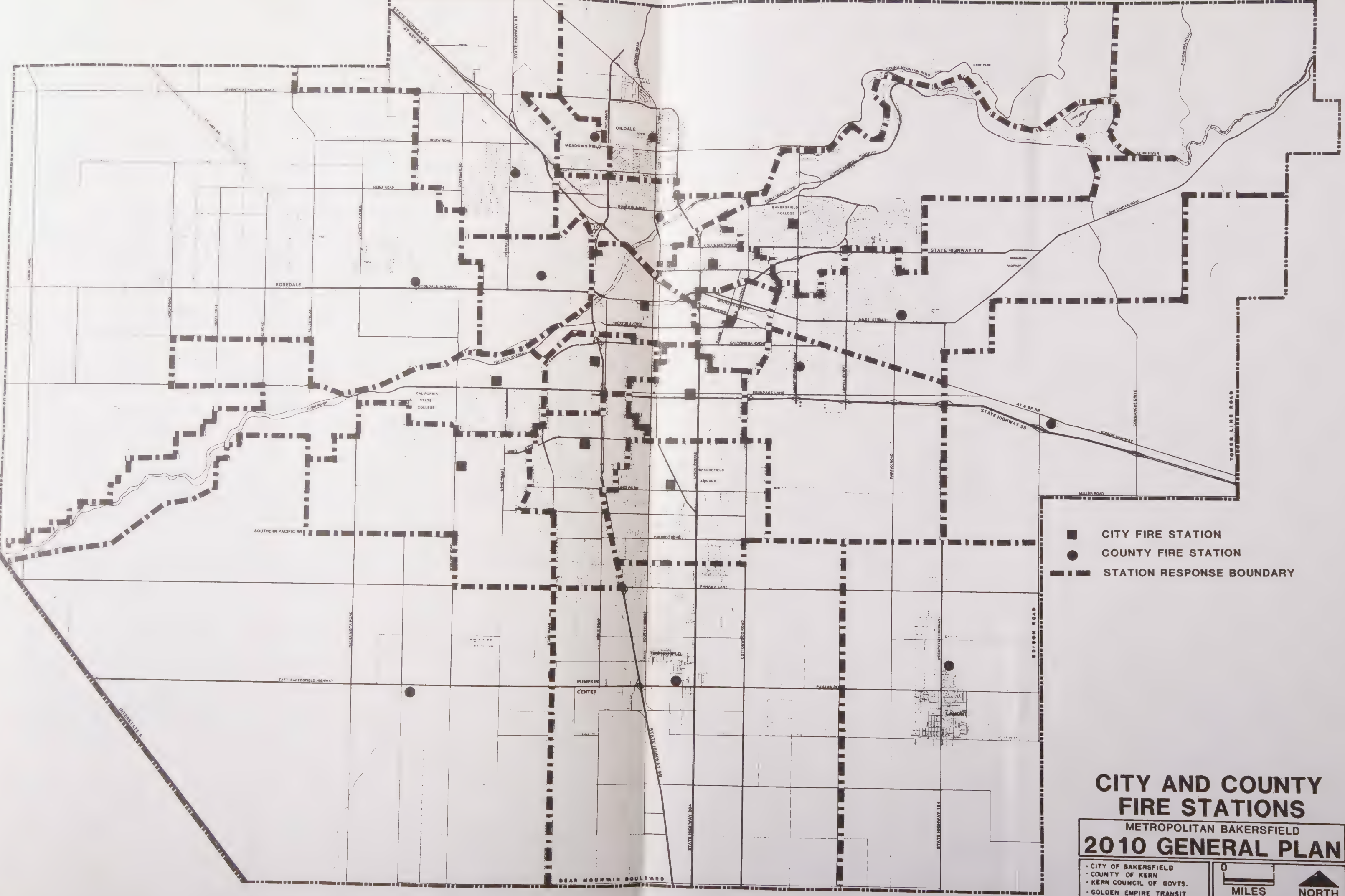
#### CITY OF BAKERSFIELD FIRE DEPARTMENT

Within the city of Bakersfield there are ten (10) fire stations at the following locations:

<u>Station</u>	<u>Location</u>
#1	H and 21st Streets
#2	East 21st and Baker
#3	Real Road and Palm
#4	Irene and Sacramento
#5	Chester and Planz Road
#6	Brundage and "V"
#7	Akers and Sorrano
#8	Mount Vernon and University
#9	Gosford and Westwold
#11	Stockdale east of El Rio

Figure VIII-4 shows both city and county fire stations in the planning area.

The Fire Department provides structural protection, fire prevention service, emergency medical service (designated first responders), rescue service, arson investigation, hazardous material coordination (AB 2185), and fire safety education to the citizenry.



- CITY FIRE STATION
- COUNTY FIRE STATION
- STATION RESPONSE BOUNDARY

**CITY AND COUNTY  
FIRE STATIONS**  
METROPOLITAN BAKERSFIELD  
**2010 GENERAL PLAN**

- CITY OF BAKERSFIELD
- COUNTY OF KERN
- KERN COUNCIL OF GOVTS.
- GOLDEN EMPIRE TRANSIT







Fire suppression personnel, are provided at a ratio of 1.05 per 1,000 population. This figure does not include the 25 volunteers used for fire fighting operations.

Fire stations within the city have been positioned to meet an emergency response time of 5 minutes or less. Average response times for engine companies are 3 minutes 40 seconds, and truck companies average 4 minutes 30 seconds.

Major concerns to the department are: (a) the conflagration potential within residential areas constructed with wood shingle roofs and exterior combustible siding; (b) multiple story commercial structures without sprinkler systems; (c) high-rise building fire protection; (d) various developed areas (older developments in the County) lacking fire hydrants; and (e) hazardous material control within the City.

As new growth and development occur, increased personnel and/or facilities will be required to meet new demands for service.

Oil production is increasing within the southwest portion of the city, requiring coordination with the planning and building personnel to ensure adequate protection considerations for adjacent urban developments.

Agreements have been adopted between the Kern County Fire Department and the City of Bakersfield Fire Department. They generally facilitate the following:

- 1) Closest station response concept
- 2) Dual agency training facility
- 3) Emergency radio communication and dispatching for both agencies from one center

The two agencies have also adopted non-overlapping and contiguous station response boundaries within the Bakersfield metropolitan area. With the automatic aid agreement, each fire station has the primary responsibility for its individual area and emergency services are provided without regard to city limits.

The Insurance Service Office (ISO) Grading Schedule is a means of classifying cities with reference to their fire defenses and physical conditions. The insurance classification developed under this schedule is only one of several elements used in development of fire insurance rates. The ISO rating for Bakersfield area is a 3 (Kern County has a rating of 4 through 9). In most instances the fire insurance costs are the same for structures in the 2 through 4 rating. Commercial insurance costs are affected by each rating change.



## KERN COUNTY FIRE SERVICES

In Kern County the County Fire Department operates a total of 43 fire stations. Within metropolitan Bakersfield 12 stations have been established at the following locations:

<u>Station</u>	<u>Location</u>
North of River	
#61 Norris	Norris & Fruitvale
#62 Meadows Field	Meadows Field Airport
#63 Highland	Chester & Universe
#64 Riverview	Chester & Roberts
#65 Green Acres	Rosedale & Calloway
#66 Landco	Rosedale & Landco
East Bakersfield	
#41 Virginia Colony	Mt. Vernon & Virginia
#42 Niles	Niles & Isabell
#44 Rio Bravo	Alfred Harrell & Lake Ming Road
#45 Edison	Edison Hwy & Pepper
South of Bakersfield	
#51 Lamont	McKee & Lily
#52 Greenfield	Golden State Hwy & Barton
#53 Old River	Taft-Bakersfield Hwy & Par St.

Staffing of fire departments can be addressed by the number of fire suppression personnel per 1,000 population. Nationally the figure averages 1.62, in the West Coast Region the average figure is 1.42 per 1,000, and in Kern County the total paid fire suppression personnel results in a 1.32 ratio. The county uses 230 part-time and/or volunteer, persons who are not counted in this total.

Fire stations within the Metropolitan Bakersfield area have been situated to meet an emergency response time of 5 minutes or less. This is a goal and does not reflect actual experience in all incidents.

All of the 9 petroleum refineries in the metropolitan area are located within Battalion 6 and within the response area of the 4 stations north of the Kern River. The Kern County Fire Department does not consider these facilities as specific fire hazards nor do they consider the oil and gas fields in and around Bakersfield as hazardous areas. A fire hazard area has been established for the mountainous region beginning along the eastern edge of the San Joaquin Valley. Just over six square miles of the study area is located within this fire hazard area.

In general the Kern County Fire Department has the capacity to protect life and property within the unincorporated portions of the study area. As new growth and development occurs, increased personnel and/or facilities will be required to meet new demands for service.

The Fire Department provides fire prevention service, general watershed and structural protection, rescue and resuscitation, and arson investigation for the entire county excepting the cities of Bakersfield, California City, Delano, Shafter, and Taft. The department operates 41 year-round and 2 seasonal stations. Approximately 20 percent of the cost of operating the fire services is attributable to watershed protection, and 80 percent to structural fire protection.

#### ANALYSIS OF FIRE SERVICES

The Bakersfield City Fire Department has not identified a specific fire hazard area, but has indicated a major concern with the conflagration potential within residential areas constructed with wood shingle roofs, fire control procedures in multiple-story commercial structures constructed without sprinkler systems and adequately protecting various developed areas lacking fire hydrants. These concerns make fire protection more difficult and costly.

The Kern County Fire Department has designated a Hazardous Fire Area within the eastern portion of the planning area. Although the Kern County Fire Department can respond to a grassland fire within this area, the California Division of Forestry must provide the needed back-up to adequately control these range fires. Currently, this portion of the metropolitan area is sparsely developed, which limits the hazard to life and property.

With currently adopted procedures and policies, there are no conflicts between city and county fire service responsibilities within the planning area.

#### HAZARDOUS MATERIALS/USES

Within the planning area, there are thousands of locations where hazardous materials are used and/or stored. Industrial and agricultural businesses use and transport these materials with little, if any, notification to state, county or municipal regulatory agencies. Recent state legislation (AB 2185), however, required counties to develop plans to respond to the release, or threatened release, of hazardous materials and set a November 1, 1986 date to develop emergency response plans, begin on-site inspections and develop hazardous materials inventories. Identification and location of all hazardous operations, materials, buildings, storage areas and hazardous material transit routes, not yet available, will be required and mapped. This detailed inventory began in 1986 and will take several years to complete. Until it is complete, impacts upon areas currently developed or permitted to develop by general plans and zoning cannot be assessed. Hazardous material incident response policies are currently being developed by the city and county in accord with the requirements of AB 2185.

Hazardous waste facilities guidelines have been adopted by the County of Kern to provide for adequate designation of hazardous waste disposal facilities to serve residents and industries of Kern County and its various incorporated cities. In response to AB 2948 - Tanner, Kern County and its incorporated cities have submitted to the State Department of Health

Services a Hazardous Waste Management Plan. When approved by the state, the plan will become the guiding policy document for the unincorporated county and a model for the cities to include within their general plan.

Currently there are no active hazardous waste disposal facilities or hazardous waste underground injection disposal facilities within the planning area.

Commercial hazardous waste shipping routes are proposed to be state and federally maintained roads. During facility siting, a route would be designated. Only those state or federal roads serving a facility would be designated as hazardous waste shipping routes.

Currently, federal regulations allow transportation of hazardous radioactive materials on all interstate highways. Trucks traveling from the highway to sites that use such materials, such as hospitals or nuclear power plants, are allowed to use the most direct route. (The California Highway Patrol has adopted I-5 as a truck route for transporting hazardous radioactive materials.)

#### PUBLIC SAFETY ISSUES

- ° Growth projections for the metropolitan area indicate a need to expand police and fire facilities and services.
- ° As a result of declining revenues, the burden of financing police and fire facilities and services has fallen increasingly upon local governments, requiring new and more cost effective methods of financing police and fire services.
- ° Although several agreements already exist between city and county police and fire protection agencies for coordination of services, this coordination could be further expanded in police services in order to improve efficiency.
- ° As the metropolitan area grows, the existing adopted Disaster Plan, emergency preparedness and evacuation plans may become obsolete, and disaster warning devices inadequate.
- ° The control of the production, usage, transport and disposal of hazardous substances is a matter of both state-wide and local concern.

GOALS AND POLICIES

The following presents the goals and policies for public safety in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1      Ensure that the Bakersfield metropolitan area maintains a high level of public safety for its citizenry.
- 2      Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development of metropolitan police and fire facilities and services.
- 3      Provide for the coordinated planning and development of planning area police and fire services.
- 4      Assure that fire, hazardous substance regulation and emergency medical service problems are continuously identified and addressed in a proactive way, in order to optimize safety and efficiency.



## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Establish and maintain standards with regard to Implementation item #3 on Page VIII-37 (I-1, I-2, I-3).
- 2 Require discretionary projects to assess impacts on police and fire services and facilities (I-3).
- 3 Adopt uniform metropolitan area standards for fire and police services, and undertake continuing metropolitan area-wide planning programs for public safety facilities (I-3).
- 4 Monitor, enforce and update as appropriate all emergency plans as needs and conditions in the planning area change, including the California Earthquake Response Plan, the Kern County Evacuation Plan, and the City of Bakersfield Emergency Plan (I-3).
- 5 Promote public education about fire safety at home and in the work place (I-4).
- 6 Promote fire prevention methods to reduce service protection costs and costs to the taxpayer (I-4).
- 7 Enforce ordinances regulating the use/manufacture/sale/transport/disposal of hazardous substances, and require compliance with state and federal laws regulating such substances (I-4).
- 8 The Kern County and Incorporated Cities Hazardous Waste Management Plan and Final Environmental Impact Report serves as the policy document guiding all facets of hazardous waste (I-7, I-8).
- 9 Restrict, after appropriate public hearings, the use of fire-prone building materials in areas defined by the fire services as presenting high-conflagration risk (I-5).
- 10 Promote crime prevention through public education (I-6).
- 11 Expand emergency medical technician use through the City and County Fire Departments, and encourage the integration of ground and air, public and private resources to achieve efficiency and effectiveness of emergency medical services (I-3).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Safety Element affecting public safety. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 City funding of Police and Fire operations and maintenance costs will be provided through City General Fund Tax Revenues.
- 2 Funding for Police and Fire equipment and facilities will be facilitated through bond issues and/or development fees and/or land dedications and/or assessment districts.
- 3 Appoint appropriate public safety officials to an advisory group that would review and provide recommendations for the coordination of police and fire services. County and city police and fire service standards should be recommended and reevaluated as needed. Standards should be recommended to achieve a balance between fiscal constraints and service levels. Five-year county and city police and fire master facility and service plans should be prepared by the coordinating group, and reviewed and updated as needed. Master plans should address future site locations, projected facility expansions, projected site acquisition costs, construction costs, and operational costs. In addition, the group would have the responsibility of monitoring and updating plans and recommending improvements to emergency medical services.
- 4 Provide adequate fire services budget resources, and continuing administrative emphasis, to effect Policies 7, 8 and 9.
- 5 Direct the fire service agencies serving the metropolitan area to mutually prepare and recommend area-specific ordinances to effect Policy 11 for city and county legislative body consideration.
- 6 Provide adequate law enforcement services budget resources, and continuing administrative emphasis, to effect Policy 12, including emphasis on effective public usage of the 911 system, the Neighborhood Watch programs, and similar crime prevention activities and programs.
- 7 Coordinate city and county efforts during review of proposed hazardous waste facilities, transportation rates, household and small business collection programs and public education programs.

- 8      Once the State of California Department of Health Services approves the August 22 - September 21, 1988 hearing Draft of the Kern County and Incorporated Cities Hazardous Waste Management Plan, the City of Bakersfield shall amend its general plan to incorporate a Hazardous Waste Management Element.







## **CHAPTER IX**

### **DOWNTOWN REDEVELOPMENT ELEMENT (CHAPTER RESERVATION)**

The City of Bakersfield reserves this chapter for the Downtown Redevelopment Element (optional element). This element's policies are not proposed for review or rewrite as part of the 2010 General Plan, but will be incorporated by reference upon adoption of the 2010 Plan.









# CHAPTER X – PUBLIC SERVICES AND FACILITIES ELEMENT

## STATUTORY REQUIREMENTS

The Public Services and Facilities Element is an optional element of the General Plan in accordance with California Government Code Section 65303. This element addresses general utility services, water distribution, sewers, storm drainage, street lighting and solid waste.

### A. GENERAL UTILITY SERVICES

#### OVERVIEW OF EXISTING CONDITIONS

Public utility services in the planning area are provided by a variety of public agencies and private companies. Although policies for the financing of new facilities, facilities extensions, and operating and maintenance costs of utility services vary greatly between the various agencies and companies, there is an increasing trend to require new development to be responsible for financing of the new or expanded utility facilities to serve such development.

Electric power supply and distribution for the entire planning area is furnished by Pacific Gas and Electric Company. Natural gas is supplied by Pacific Gas and Electric Company and by Southern California Gas Company (See Figure X-1 for service areas). Telephone service is supplied to the total metropolitan area by Pacific Bell. Facility expansion cost responsibilities, and service rates, are governed by the California Public Utilities Commission. Cable TV service is provided to the metropolitan area by Cox Cable and Warner Amex (see Figure X-2 for service areas) under the terms of city and county franchises regulating installation and service charges.

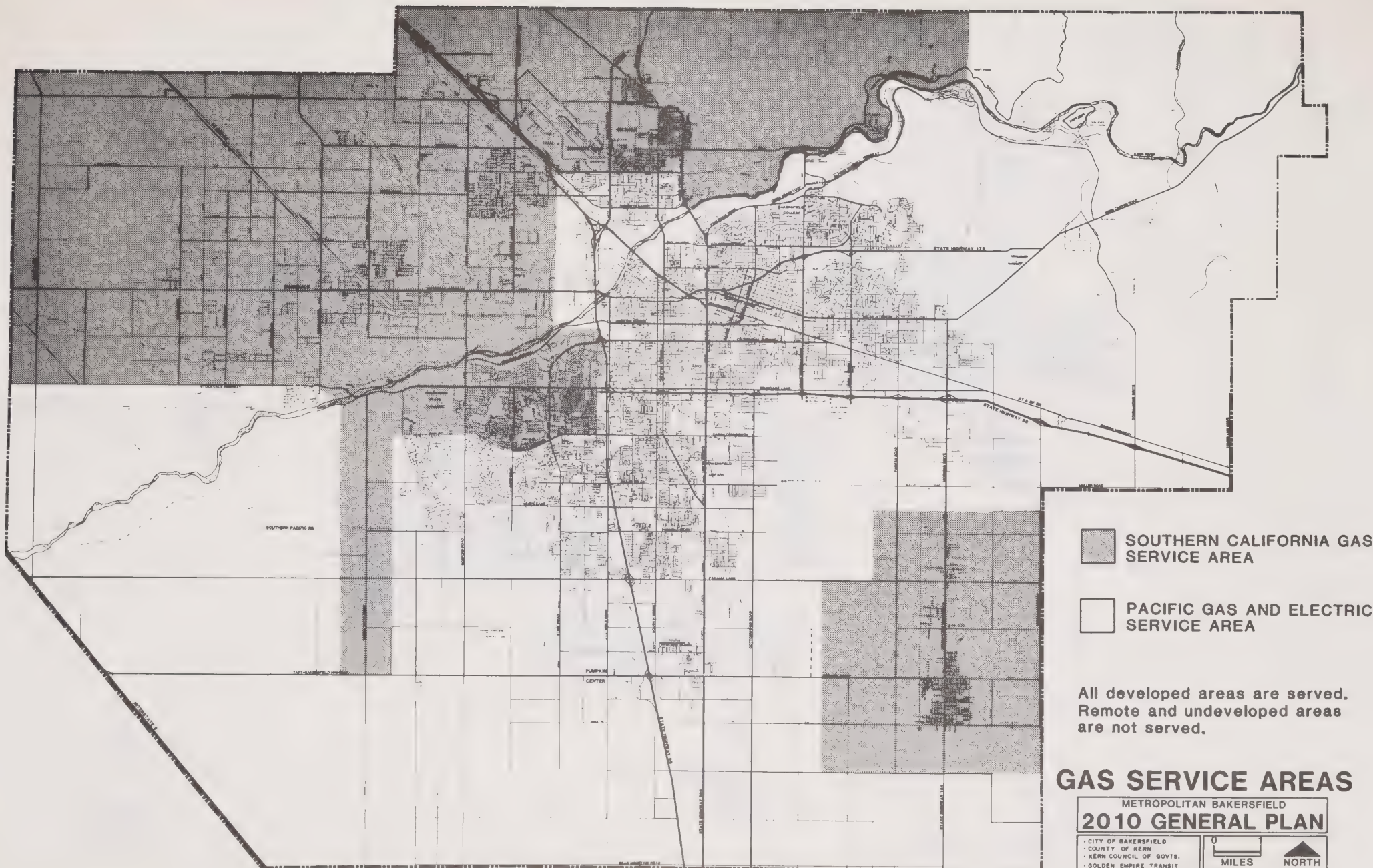
The other public utility services for the planning area, wastewater collection and treatment, water supply and distribution, storm drainage, solid waste collection and disposal, and street lighting are briefly described at the beginning of subsections of this chapter.

#### GENERAL UTILITY SERVICE ISSUES

The following public utility issues have been identified:

- ° The provision of utility services to the metropolitan area is currently subject to fragmented planning and potential duplication and overlap as a result of the multiplicity of agencies which provide such services.
- ° The financing of municipal-type utility services for anticipated metropolitan area growth is an increasing problem in view of increasingly restricted local government financial resources.





 SOUTHERN CALIFORNIA GAS SERVICE AREA

 PACIFIC GAS AND ELECTRIC SERVICE AREA

All developed areas are served.  
Remote and undeveloped areas are not served.

## GAS SERVICE AREAS

METROPOLITAN BAKERSFIELD  
**2010 GENERAL PLAN**

• CITY OF BAKERSFIELD  
• COUNTY OF KERN  
• KERN COUNCIL OF GOVTS.  
• GOLDEN EMPIRE TRANSIT

0  MILES  NORTH

**FIGURE X-1**





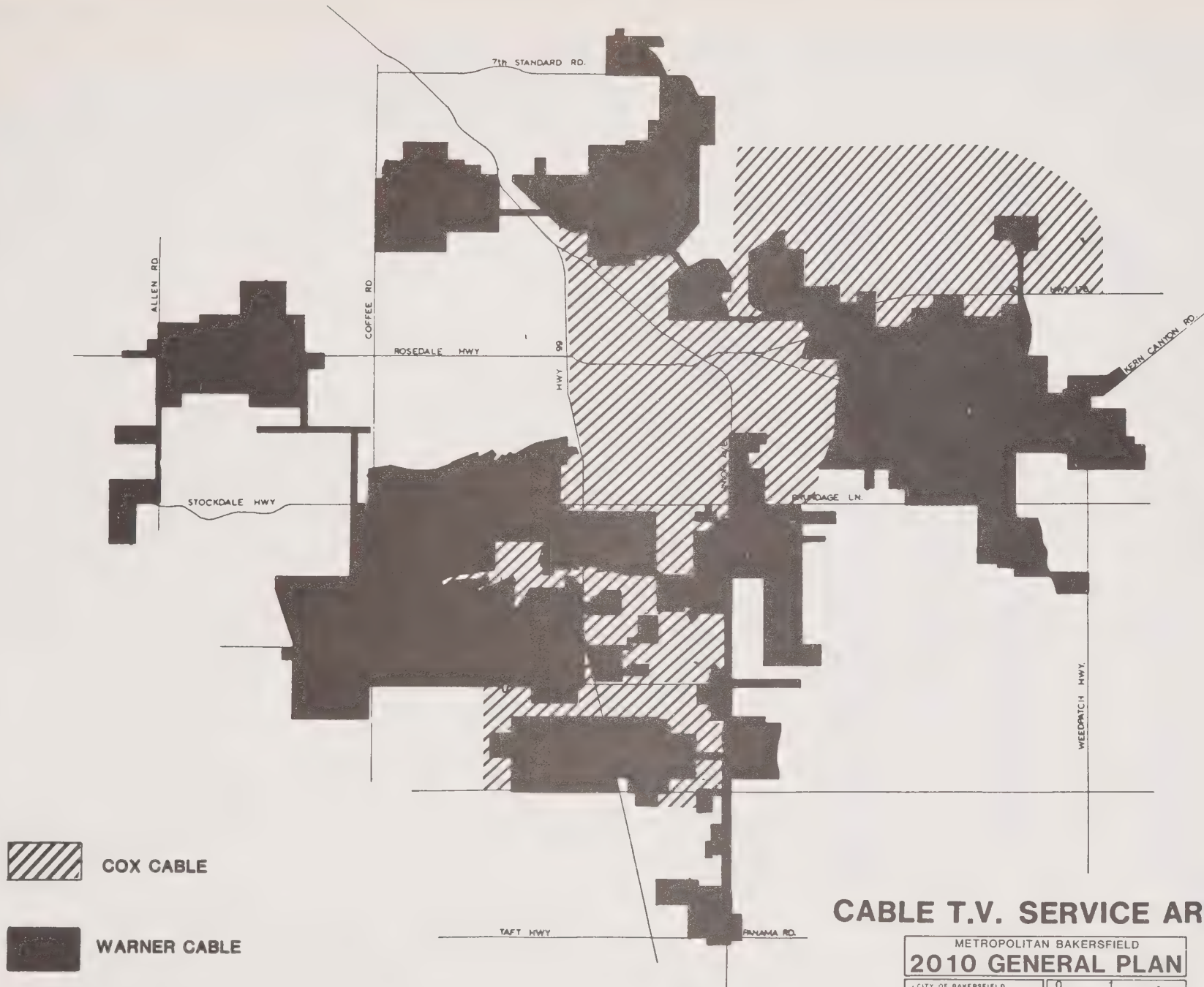


FIGURE X-2



GOALS AND POLICIES

The following presents the goals and policies for general utility services in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1 Maintain a coordinated planning and implementation program for the provision of public utilities to the planning area.
- 2 Coordinate the planning and implementation of planning area municipal-type utility facilities and services.
- 3 Develop continuing agreement between the local government agencies providing municipal-type public utility services to the planning area as to service area boundaries and responsibilities.
- 4 Develop funding principles and programs which will assure that all new development will pay for the incremental costs of the public facilities and services--utilities bridges, parks, and public safety facilities--both on-site and off-site, to serve such development.



## POLICIES

Goals will be achieved through the following policies which set more specific direction and guide actions.

- 1 Strengthen existing procedure by which city, county and special district staffs coordinate planning for specific individual public works projects and programs (I-1).
- 2 Seek agreement between the county, city, and special districts serving the metropolitan area regarding an appropriate lead-agency designation for municipal-type utility facilities and services planning and coordination (I-2).
- 3 Municipal-type utility services within the city's sphere of influence (or designated urban area) should be provided (I-3).
- 4 Develop an acceptable method of providing temporary city services outside municipal corporate boundaries based on agreements to annex, in circumstances where such agreements are of mutual benefit to the city and the served unincorporated area (I-3).
- 5 Require all new development to pay its pro rata share of the cost of necessary expansion in municipal utilities, facilities and infrastructure for which it generates demand and upon which it is dependent (I-4).
- 6 Utilize financing methodologies which enable local agencies to assist in financing of projects within the area which are essential to development in accord with the 2010 Plan and of scope too large to permit financing by individual developments (I-5).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Public Services and Facilities Element affecting utilities. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Consider the formation and implementation of a more formalized staff-level public works facilities coordinating group with membership from all major local government agencies with public utility responsibilities within the planning area.
- 2 Form an ad-hoc committee of representatives from each local agency, including both elected and appointed officials, providing municipal-type utility services to ensure coordinated and efficient service.
- 3 Assign to the committee described in implementation measure 2 the task of recommending to their respective legislative bodies for consideration and adoption draft agreements incorporating these principles.
- 4 Review existing fee structures and ordinances, and adopt modifications thereto, which require equitable and adequate pro rata cost sharing by all new development. Include in such new fee structures and ordinances provisions for obtaining and financing of full-width rights-of-way for ultimate street and highway needs, and major wastewater collection system additions and extensions of facilities sized for ultimate development.
- 5 Create benefit assessment districts or establish service fees for the distribution of costs to users for capital improvement replacement costs and maintenance, utilizing such districts for the financing of improvements which are essential to planning area development.

## B. WATER DISTRIBUTION

### OVERVIEW OF EXISTING CONDITIONS AND ISSUES

#### EXISTING SERVICES

Chapter V, the Conservation Element, generally describes the water resources available for the region and for the study area. Purveyor service areas for the water agencies and companies which provide water distribution facilities in the area are depicted in Figures X-3 and X-4.

A major portion of the City of Bakersfield is served by California Water Service Company, a privately held public utility; its water supply is obtained principally from wells and supplemented by Improvement District No. 4 (I.D. 4)-treated State Water Project surface water supply. The balance of the incorporated city is principally served by the City of Bakersfield's Ashe Water Company, with supplies obtained from wells. The city also operates the 2,800 acre spreading area shown on Figure X-3 providing groundwater recharge for Kern River flows utilizing both its own water rights and agreements with other water agencies for "banking" their waters in the underground aquifer.

The Oildale portion of the study area is served by the North of the River Municipal Water District (NORMWD) and the Oildale Mutual Water Company. NORMWD contracts for I.D. 4 water, retailing such water to Oildale Mutual and to its own customers, and utilizes wells; Oildale Mutual has its own wells and contracts for I.D. 4 water with NORMWD.

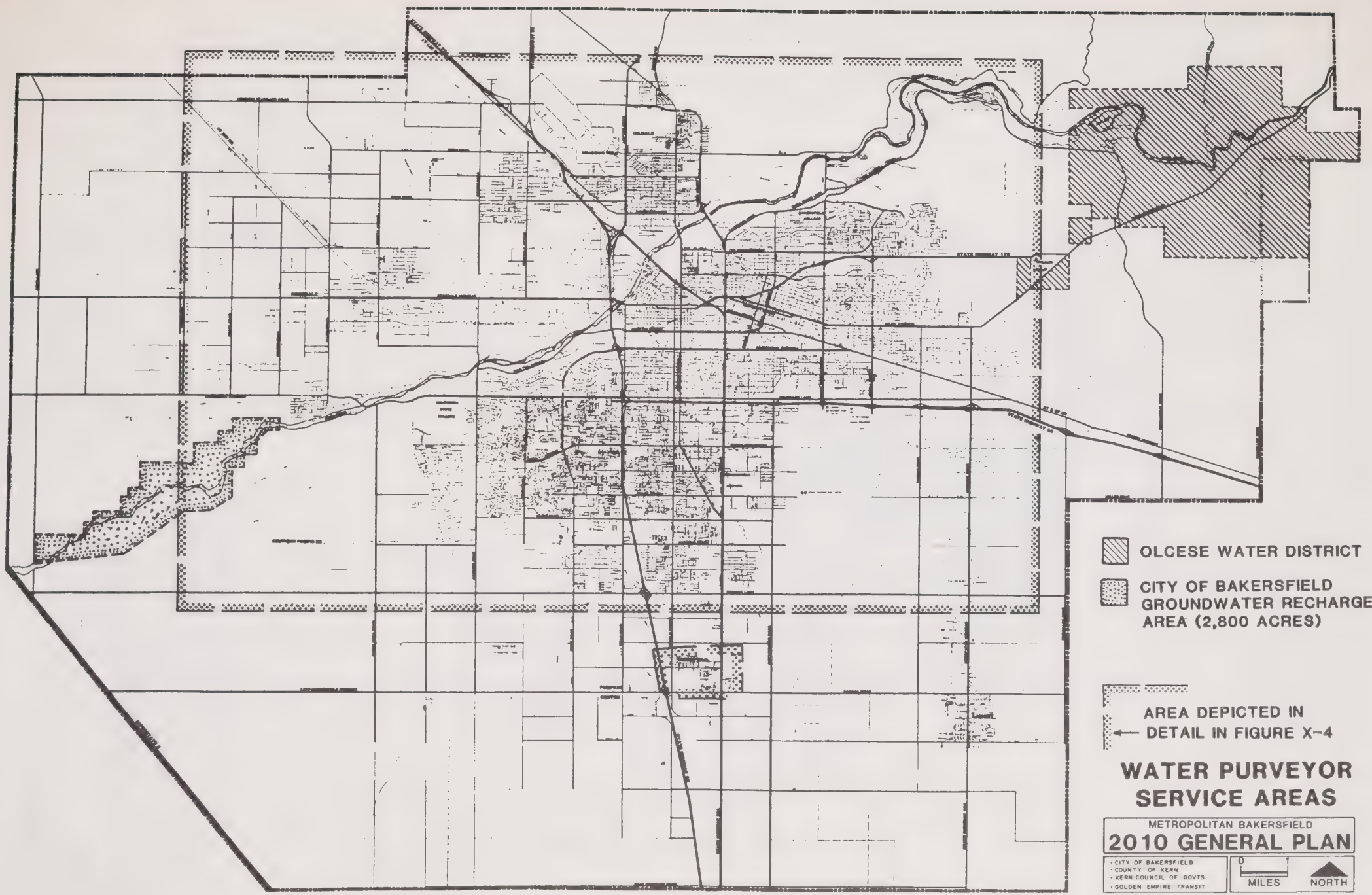
A large unincorporated area in east Bakersfield is serviced by the East Niles Community Services District from well supplies and I.D. 4's treated State Water Project surface water supply. No water distribution or water service area exists easterly of the East Niles and Cal Water service areas until the westerly boundary of Olcese Water District (see Figure X-3) is reached.



The area north of the Kern River and west of Highway 99 is served by numerous water districts and companies. Some water quality problems have been experienced by those entities which draw their principal supply from shallow aquifers in the area (the water supply for the entire area is groundwater based). A portion of the recent city annexation in the area north of the river will be served by the city's Ashe Water Company using either local deep-well supplied ground-water, well water from south of the river, or a combination of both supply sources. California Water Service Company will serve the area east of Coffee Road in the city.


Urban water service in the Lamont area, in the southeast corner of the study area, is provided by the Lamont Public Utility District. Water service in the Greenfield area is provided by the Greenfield County Water District.



8-X



-  **OLCESE WATER DISTRICT**
-  **CITY OF BAKERSFIELD GROUNDWATER RECHARGE AREA (2,800 ACRES)**


 **AREA DEPICTED IN  
← DETAIL IN FIGURE X-4**

**WATER PURVEYOR  
SERVICE AREAS**

**METROPOLITAN BAKERSFIELD  
2010 GENERAL PLAN**

- CITY OF BAKERSFIELD
- COUNTY OF KERN
- KERN COUNCIL OF GOVTS.
- GOLDEN EMPIRE TRANSIT

0 1  
MILES

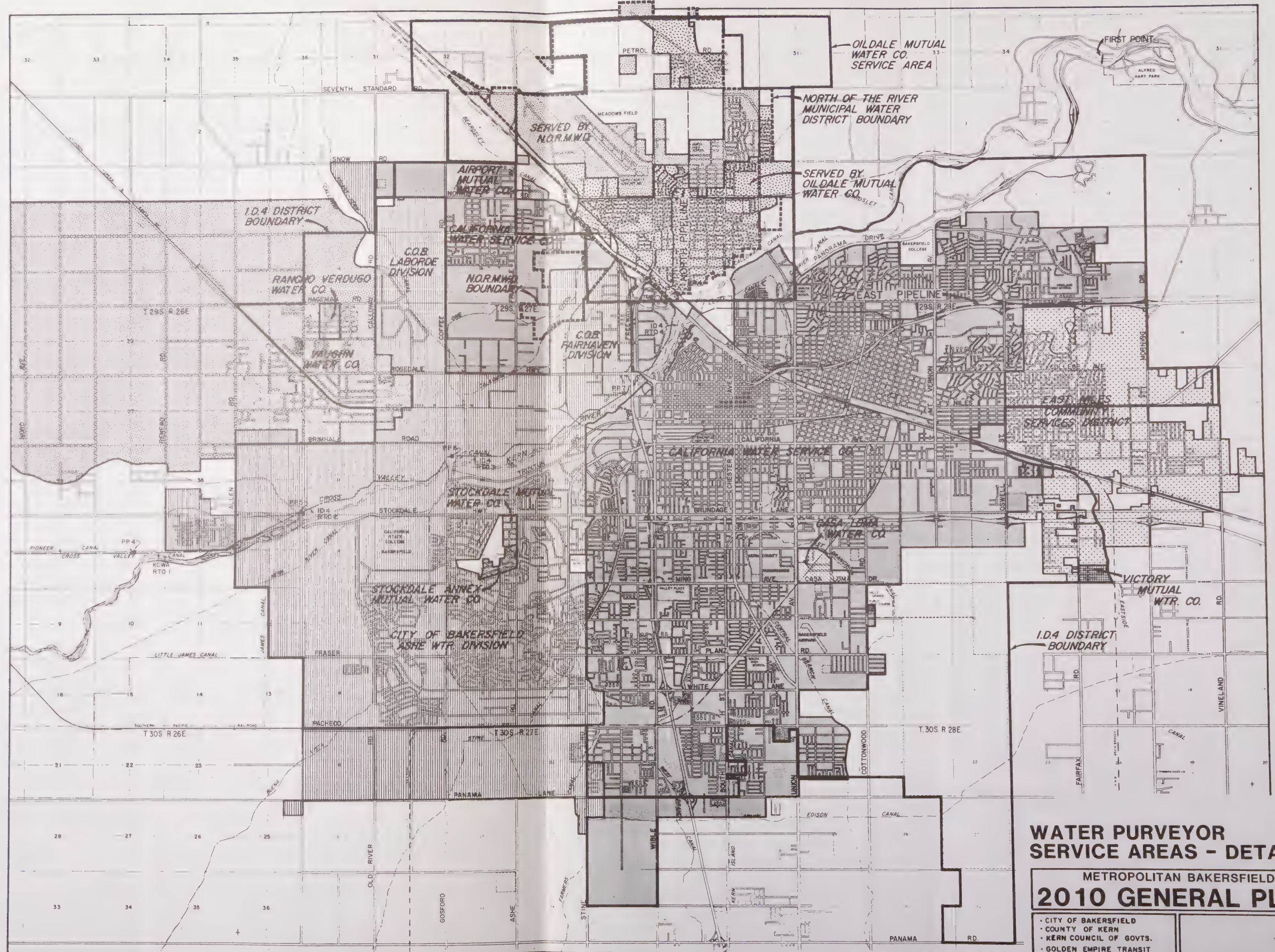
 **NORTH**

**FIGURE X-3**









# **WATER PURVEYOR SERVICE AREAS - DETAIL**

METROPOLITAN BAKERSFIELD  
**2010 GENERAL PLAN**

- CITY OF BAKERSFIELD
- COUNTY OF KERN
- KERN COUNCIL OF GOVTS.
- GOLDEN EMPIRE TRANSIT







Improvement District Number Four (I.D. 4) of the Kern County Water Agency was formed to alleviate groundwater overdraft in metropolitan Bakersfield and outlying areas by providing a supplemental surface supply. The district receives most of its water supply from the State Water Project (SWP), although it exchanges SWP water for Kern River water whenever possible. I.D.4 operates a water treatment plant, with contracts to purify up to 25,000 acre-feet of water annually, and wholesales this treated water to purveyors in lieu of their pumping from groundwater.

Figure X-4 shows, in addition to the purveyor service areas, the locations of the Cross-Valley Canal bringing State project water to the I.D. 4 treatment facility at Golden State Highway, and the "north" and "east" pipelines from the facility which transmit treated water to the served retail purveyors.

The Kern County Water Agency prepared, in 1983, a report projecting municipal and industrial water demands for an area closely corresponding to the study area. That report predicted an increase from present usage of about 100,000 acre feet per year to a year 2010 usage of about 130,000 acre feet per year.

#### WATER SUPPLY ANALYSIS

Existing engineering studies which address the ability of plan area water supplies to serve 2010 Plan growth, although varying in terms of quantitative forecasts and addressing study areas of differing size, offer data which indicate that existing major water sources and water systems can meet future growth potential in the planning area for the year 2010 with the possible exception of the northeast non-district area. The groundwater recharge programs currently in place and being considered are key components of the overall programs which would assure such adequacy.

#### POTENTIAL INTERCONNECTION OR CONSOLIDATION OF EXISTING WATER SYSTEMS AND SUPPLIES

The previously-referenced study regarding project costs of an Olcese/I.D. 4 joint project outlines the economic benefits of such interconnection for the groundwater deficient northeast Bakersfield area. The area north of the river and west of Highway 99, has several documented areas of high nitrates, higher-than-desirable total dissolved solids, and trace contaminants in its upper, unconfined aquifers from which local water supplies can be most economically derived. Local, smaller, water companies serve a portion of the urban population in this area. It is possible that, in the long term, consolidation or interconnection of these local water systems with other larger systems may be desirable. On a larger scale, consolidation of the city's Kern River supply and the Kern County Water Agency I.D. 4 supply has potential longer range benefits for the overall planning area.

#### WATER DISTRIBUTION ISSUES

- ° Provision of adequate water service to the planning area.
- ° Coordination of water purveyors and water rights holders.



GOALS AND POLICIES

The following presents the goals and policies for water distribution in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1        Ensure the provision of adequate water service to all developed and developing portions of the planning area.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1        Reach agreement regarding mutually beneficial improvements in domestic water service and distribution facilities as required to improve overall metropolitan water service capabilities (I-1, I-2).
- 2        Continue to provide domestic water facilities which are contributed directly by developers, through development and/or availability fees.
- 3        Require that all new development proposals have an adequate water supply available (I-3, I-4).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Public Services and Facilities Element affecting water. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Utilize the Kern County Water Agency's Urban Bakersfield advisory committee for coordination of planning efforts.
- 2 Implement the Urban Water Management Plan prepared by I.D. 4 (1985) (see appendices).
- 3 Review, and modify as required, existing fee structures and ordinances to assure desired system financing and policy implementation.
- 4 Study alternatives to provide an adequate water supply to the northeastern "non-district" area.

## C. SEWER SERVICE

### OVERVIEW OF EXISTING CONDITIONS AND ISSUES

#### EXISTING SERVICES

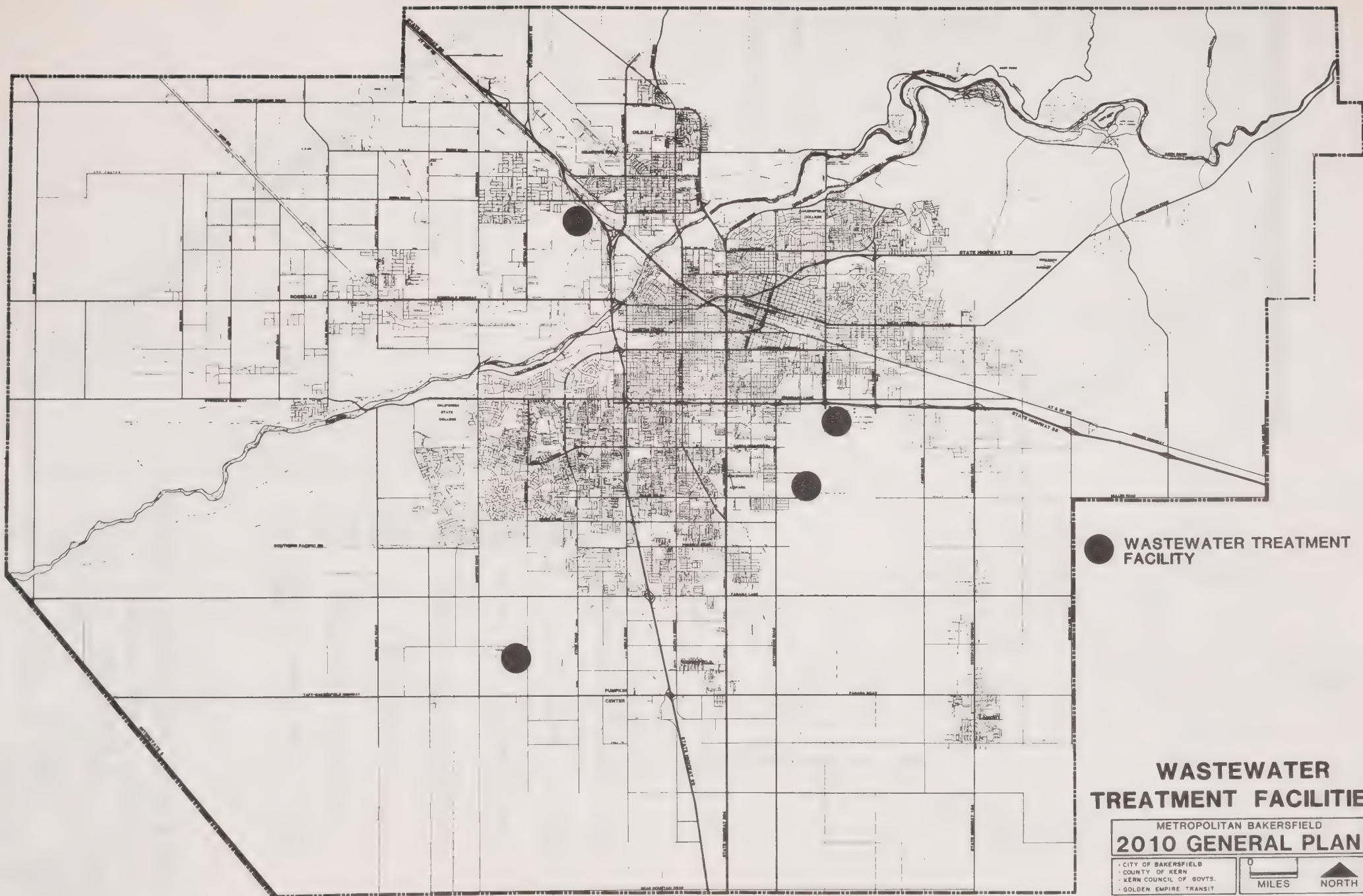
The study area is served by five major wastewater treatment facilities: the City of Bakersfield's Treatment Plant No. 2, the City's Treatment Plant No. 3, the North of River Sanitary District (NORS) plant, Mount Vernon/Panorama District plant, and the Lamont Public Utility District plant (located outside study area boundary). There are several small, temporary treatment facilities in the Rosedale area north of the Kern River and west of NORS's service area boundaries; much of that area is developed using on-site septic tanks, as is a portion of the northeast (Rio Bravo) area of the city. Some of the developed Rio Bravo area is sewered to community-level septic systems. Metropolitan area wastewater treatment plant locations are shown on Figure X-5.

The County of Kern contracted with a consulting firm to prepare a study of possible sewerage and wastewater treatment facilities for the developing area north of the Kern River and west of Highway 99, referred to as County Service Area (C.S.A.) No. 71 (see Figure X-6). This study recommended construction of a wastewater treatment and disposal facility in the west end of the C.S.A. During the study period, the city initiated, at property owners' request, a major annexation encompassing the central, developing, portion of C.S.A. 71, and prepared plans for providing sewer service from that annexation to the city's Plant No. 3. The sewer trunk line to the annexation area is designed with sufficient capacity to serve the area between the annexation's westerly boundary and Freeway 99. This line, known as the Buena Vista line has been constructed. Another line is planned on the Allen Road alignment to serve areas west of the Buena Vista line's service area. Following lengthy negotiations it was agreed that the city would serve the Rosedale area without requiring annexation.

Additional major trunk sewers will be required to serve the urban growth projected in this plan. The proposed alignments of these trunk sewers are shown on Figure X-7. It may be desirable, depending upon the timing with which growth actually occurs within the planning area, to consider the siting and construction of a new city treatment plant at a site west of Plant 3. The most desirable location of such a site, if required, can only be determined after actual growth patterns relative to trunk sewer system and Plant 3 become evident.

Several sanitary districts maintain or contract for maintenance of sewer collection systems in the unincorporated metropolitan area, discharging their sewage to the city's wastewater treatment and disposal facilities. The boundaries of these districts are shown on Figure X-6. Major trunk lines and pump stations for such districts, for NORS and for the city's collection system are shown in Figure X-7, as are planned major trunk line connections to the city's system.

X-14



● WASTEWATER TREATMENT FACILITY

## WASTEWATER TREATMENT FACILITIES

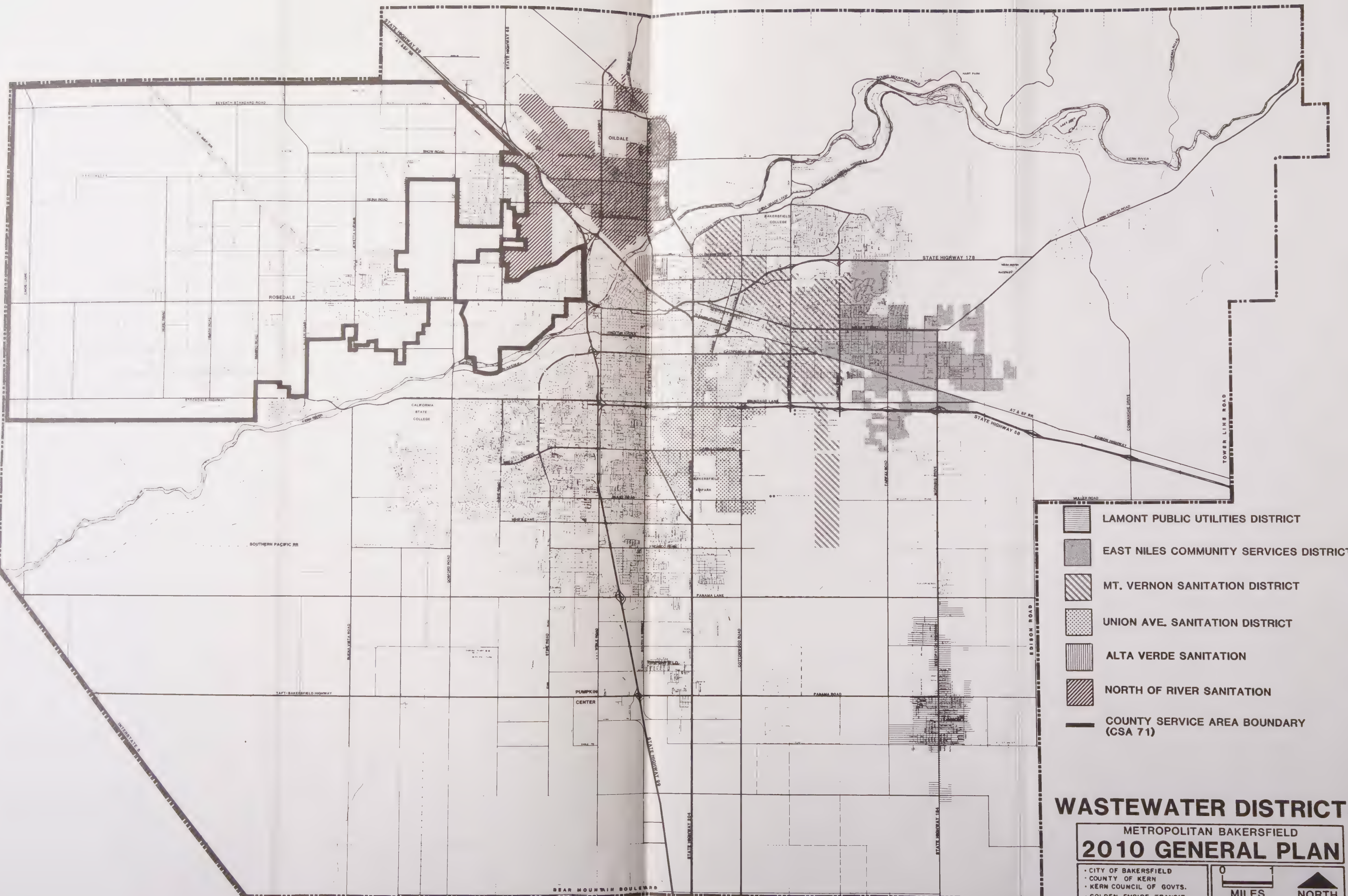
METROPOLITAN BAKERSFIELD  
2010 GENERAL PLAN

• CITY OF BAKERSFIELD	0	MILES	NORTH
• COUNTY OF KERN			
• KERN COUNCIL OF GOVTS.			
• GOLDEN EMPIRE TRANSIT			

FIGURE X-5







- LAMONT PUBLIC UTILITIES DISTRICT
- EAST NILES COMMUNITY SERVICES DISTRICT
- MT. VERNON SANITATION DISTRICT
- UNION AVE. SANITATION DISTRICT
- ALTA VERDE SANITATION
- NORTH OF RIVER SANITATION
- COUNTY SERVICE AREA BOUNDARY (CSA 71)

# WASTEWATER DISTRICTS

METROPOLITAN BAKERSFIELD

## 2010 GENERAL PLAN

CITY OF BAKERSFIELD

COUNTY OF KERN

KERN COUNCIL OF GOVTS.

GOLDEN EMPIRE TRANSIT

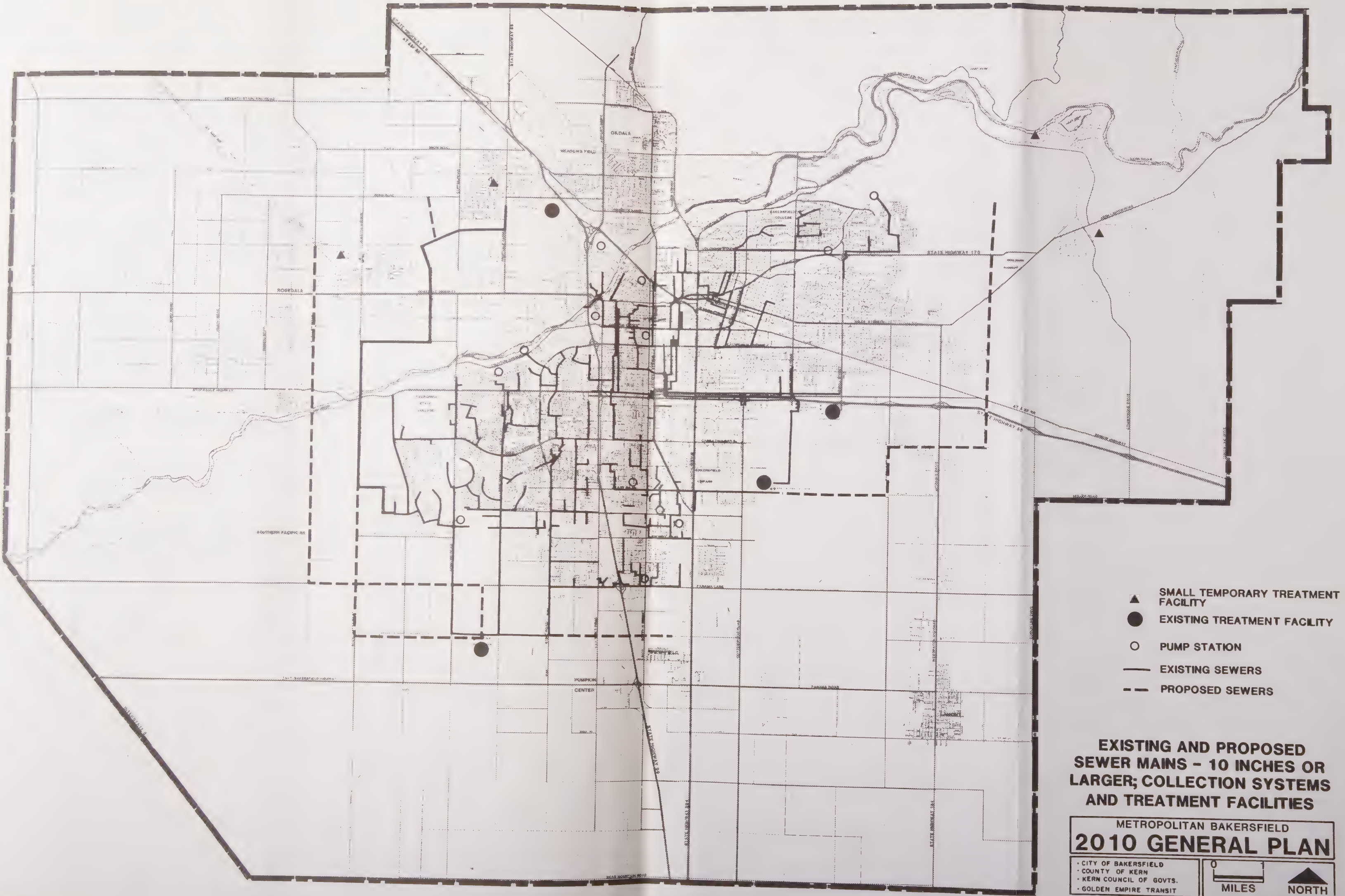
0 1

MILES

NORTH







- ▲ SMALL TEMPORARY TREATMENT FACILITY
- EXISTING TREATMENT FACILITY
- PUMP STATION
- EXISTING SEWERS
- - - PROPOSED SEWERS

**EXISTING AND PROPOSED  
SEWER MAINS - 10 INCHES OR  
LARGER; COLLECTION SYSTEMS  
AND TREATMENT FACILITIES**

METROPOLITAN BAKERSFIELD  
**2010 GENERAL PLAN**

• CITY OF BAKERSFIELD  
• COUNTY OF KERN  
• KERN COUNCIL OF GOVTS.  
• GOLDEN EMPIRE TRANSIT

0 1 2  
MILES  
NORTH





Urban growth in the northern, industrializing areas of Oildale is dependent upon NORSD plant expansion. Community growth to the southwest and south will not be constrained by sewage disposal assuming continued, appropriately timed, expansion of city wastewater treatment facilities. Continued urban growth to the northeast will be dependent upon solutions to provide sewers either directly to Plant No. 2 or through the East Niles system. One possible trunk line system which would represent a solution to sewerage a large part of the Olcese Water District is shown on Figure X-7.

The city's Public Works Department indicates that its sewer design standards are to be updated in the near future, reflecting current design practices and policies. The County of Kern Public Works Department, and the major sanitary districts in the metropolitan area, have design standards currently in effect.

#### SEWER SERVICE ISSUES

The provision of adequate wastewater collection, treatment and disposal for the planning area is essential to protect the health of residents, permit planned urban densities, and protect the groundwater resource. The issues identified with respect to this vital infrastructure component are:

- ° The planning area is served, or potentially served, by several wastewater agencies with differing plans for service area expansion.
- ° Existing urban development in the planning area is served by on-site systems creating potential health and groundwater pollution problems.
- ° The costs of major trunk line extensions, treatment and disposal facilities and the provision of centralized sewer collection for urban areas now served by on-site systems, are difficult to finance.

GOALS AND POLICIES

The following presents the goals and policies for sewers in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1        Ensure the provision of adequate sewer service to serve the needs of existing and planned development in the planning area.
- 2        Provide for the resolution of jurisdictional sewer service planning differences to permit cost-effective sewer service.
- 3        Provide trunk sewer availability to and treatment/disposal capacity for all metropolitan urban areas, to enable cessation or prevention of the use of septic tanks where such usage creates potential public health hazards or may impair groundwater quality, and to assist in the consolidation of sewerage systems. Provide sewer service for urban development regardless of jurisdiction.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions

- 1 Effect the consolidated collection, treatment, and disposal of wastewater from all urban development within the metropolitan area, discouraging the creation or expansion of separate systems and encouraging the consolidation and interconnection of existing separate systems (I-1, I-2, I-3).
- 2 Define benefit-related areas in which appropriate development fees will be assessed or assessment districts will be established to defray the costs of the wastewater collection, treatment and disposal facilities necessary to serve such areas (I-4, I-5).
- 3 Consider utilization of capital improvement funds and assessment district monies to construct sewer trunk lines shown on Figure X-7, consistent with development timing (I-5).



IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Public Services and Facilities Element affecting sewer service. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Achieve agreement between the city, county, and the special districts providing sewer service to the planning area regarding consolidated or better coordinated wastewater facilities and services.
- 2 Undertake periodic revision of overall wastewater collection, treatment, and disposal needs for the planning area as growth projections and trends dictate such revision.
- 3 Locate all centralized wastewater treatment and disposal facilities in accord with the siting criteria of the appropriate regulatory agencies.
- 4 Define and select at city, county, and special district staff levels, for legislative body adoption, uniform policies and procedures for development fees and assessment district usage to assist in wastewater facilities financing.
- 5 Require all new urban development to be serviced by centralized wastewater collection, treatment and disposal facilities except:
  - a) Residential development of one-acre parcels or larger.
- 6 Developers shall be required to install dry sewer lines in streets and connections thereto for parcels less than 1 acre (net) in size in areas where a centralized sewer system is planned and imminent and where on-site systems can be proven to be temporarily satisfactory.

## D. STORM DRAINAGE

### OVERVIEW OF EXISTING CONDITIONS

Storm drainage policies for the city's and for the county's urbanizing areas have reflected recognition of the limited annual rainfall and the relatively flat topography on which most of the study area's development has occurred. Both the city and the county adopted several "planned drainage areas" for which master storm drain system plans have been developed and in which area-specific, benefit-related development fees are charged to fund construction of major drainage facilities. Figure X-8 shows these planned drainage areas, additional study areas for which formal planned drainage areas have not yet been initiated, future study areas which have been tentatively designated, existing county surface drainage areas, and areas deemed to have existing storm drainage problems, all based on data furnished by the Kern County Public Works Department.

The boundaries of currently adopted planned drainage areas are shown on Figure X-8. The Breckenridge and Shalimar planned drainage areas have been jointly created by the City and County. Typical fees in the planned drainage areas range from \$1,500.00/AC to \$2,500/AC.

All county fees are based strictly on acreage, not considering land use. In the city's Pioneer Planned Drainage Area one fee has been adopted for residential development and a higher fee is used for commercial/industrial development, based upon the concept that commercial/industrial uses generate more runoff than residential uses.

It is worth noting that one effect of the county's requirement that storm flows be kept on-site is the creation of a myriad of small drainage basins. The planned drainage district concept, encouraging larger, area-wide drainage facilities, tends to mitigate maintenance problems associated with the proliferation of smaller drainage basins.

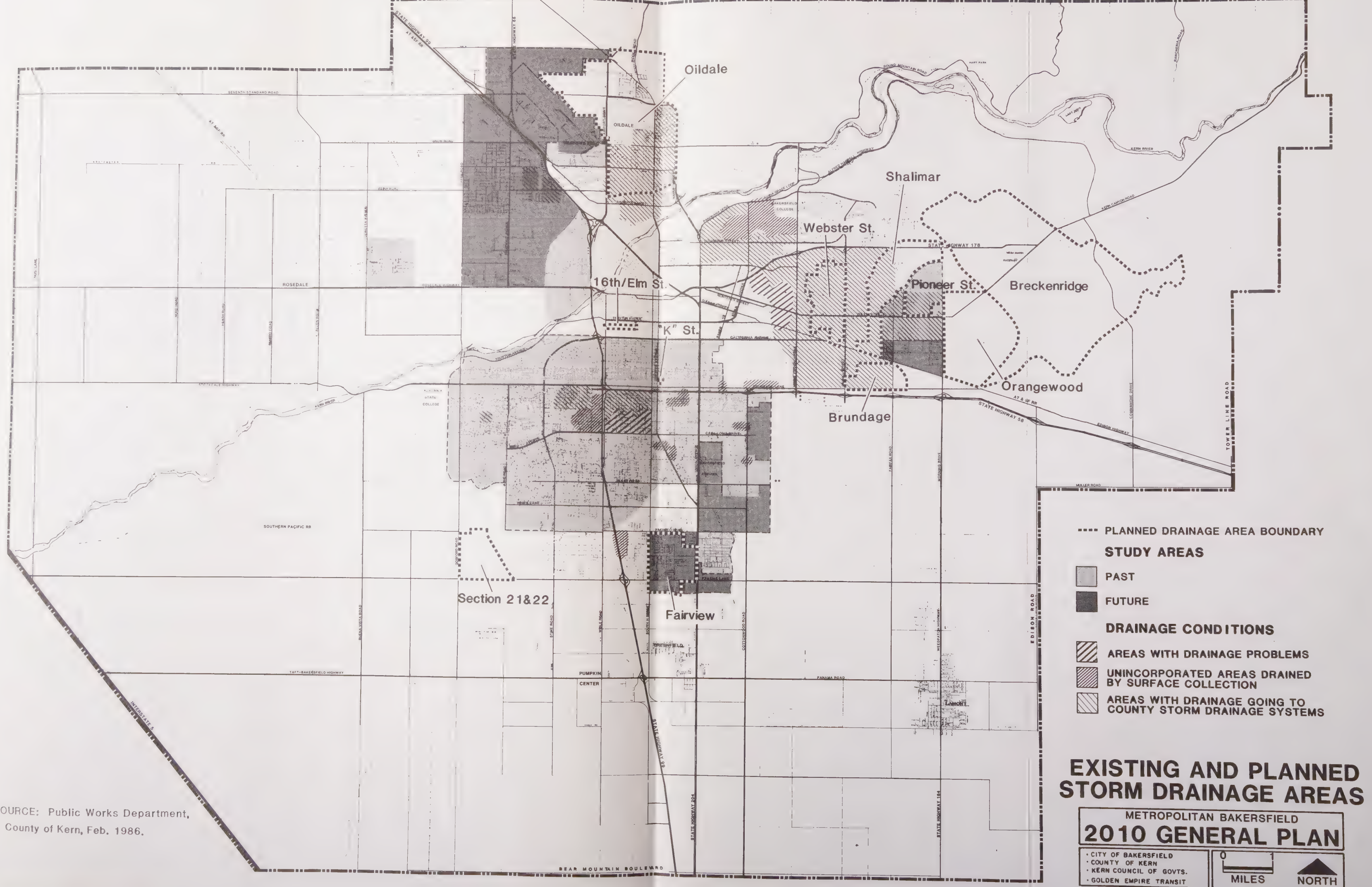
City and county policies and design standards regarding storm drainage for newly developing areas are not greatly at variance with one another. The primary difference between the city and county philosophies relates to provisions for on-site retention (sumps) of storm water generated by developing properties.

Kern County typically requires developing sites to provide for their own on-site retention or show that existing facilities have sufficient capacity to carry the additional runoff. This policy extends even to individual, newly created single-family residential lots. If it can be clearly demonstrated that adequate downstream facilities exist, the county will sometimes lessen their full retention requirement to detention facilities so that the peak off-site runoff is not increased. One significant impact of this county policy is the proliferation of isolated drainage basins.

The city tends to accept on-site runoff into its system as long as adequate downstream facilities are in place. On large planned developments where off-site drainage facilities are not available and on-site retention will be required, the city attempts to strategically locate sumps so that they







# EXISTING AND PLANNED STORM DRAINAGE AREAS

METROPOLITAN BAKERSFIELD  
**2010 GENERAL PLAN**

- CITY OF BAKERSFIELD
- COUNTY OF KERN
- KERN COUNCIL OF GOVTS.
- GOLDEN EMPIRE TRANSIT



SOURCE: Public Works Department,  
County of Kern, Feb. 1986.





can be incorporated into future development. Proliferation of multiple isolated basins is discouraged.

There is currently no quantitative data regarding dry-weather nuisance water flows in the storm drainage systems serving various sections of the Bakersfield metropolitan area. Such flows are significant in some areas, which may restrict the joint usage of drainage basins as recreational areas. There is no known data on the subject of dry weather nuisance flows.

#### STORM DRAINAGE ISSUES

The provision of adequate storm drainage facilities for the planning area is essential to the safety and welfare of area residents, and necessary for the development of the area in accord with the 2010 Plan. However, the provision of adequate storm drainage facilities for both currently developed portions of the planning area and for planning area development in accord with the 2010 Plan is both increasingly costly and difficult because of the generally flat topography of much of the area and the limited number of available storm drainage disposal points.

GOALS AND POLICIES

The following presents the goals and policies for storm drainage in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1      Ensure the provision of adequate storm drainage facilities to protect planning area residents from flooding resulting from storm water excess.
- 2      Maintain a comprehensive storm drainage system which serves all urban development within the planning area.

POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1      Develop drainage programs which will serve all currently developed portions of the planning area that are not now served by adequate storm drainage systems (I-1, I-2, I-3).
- 2      The city and county should pursue individual drainage plans where they are most needed (I-2, I-3, I-4).
- 3      Investigate the preparation of a Master Drainage Plan based on the proposed growth in the planning area (I-5).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Public Services and Facilities Element affecting storm drainage. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Utilize assessment districts or public improvement districts to defray or finance costs of needed storm drainage facilities for already-developed areas.
- 2 Establish, for areas where development is planned, city or county "planned drainage areas" to finance and construct storm drainage facilities.
- 3 Develop standards for engineering and construction of drainage facilities common to both city and county. Adopt these common standards, and provide for periodic review and revision.
- 4 Use drainage area retention basins for drainage disposal when direct discharge to a waterway is not available. Combine storm drainage usage with recreational usage when feasible. Incorporate in such basins recessed areas for off-season retention of nuisance flows. Maintain all basins with the primary purpose of drainage disposal, with recreational usage as a secondary objective.
- 5 Investigate development of a Master Drainage Plan for the plan area based on the proposed growth. The master plan would serve as a layout for future storm drainage facilities providing storm drainage control services.



## E. STREET LIGHTING

OVERVIEW OF EXISTING CONDITIONS

## EXISTING SERVICES

Street lighting is provided in nearly all developed areas of the city (see Figure X-9). Lighting which is not provided by the city is provided either by other governmental agencies or private ownership. As an example of the former, Caltrans provides lighting along state highways, freeways, and associated facilities. Other agencies, such as school districts and airport districts, provide lighting for their facilities.

Lighting in the study area outside of the incorporated city is similarly provided, with the county being the principal operating agency instead of the city. The county provides these services through 52 County Service Areas (CSAs) and two Public Utility Districts. The CSAs range in size from a few blocks, with 12 lights, to areas of several square miles with hundreds of street lights.

Lighting in the study area which is privately owned includes subdivisions, mobile home parks, and private businesses with the provided being a homeowners association, landlord, or business. Privately owned lighting represents a small fraction of the lighting within the study area.

## STREET LIGHT OWNERSHIPS

City of Bakersfield	6,613
Kern County	4,107
Other Public Agencies	1,500
Private	700
TOTAL	<u>12,920</u>

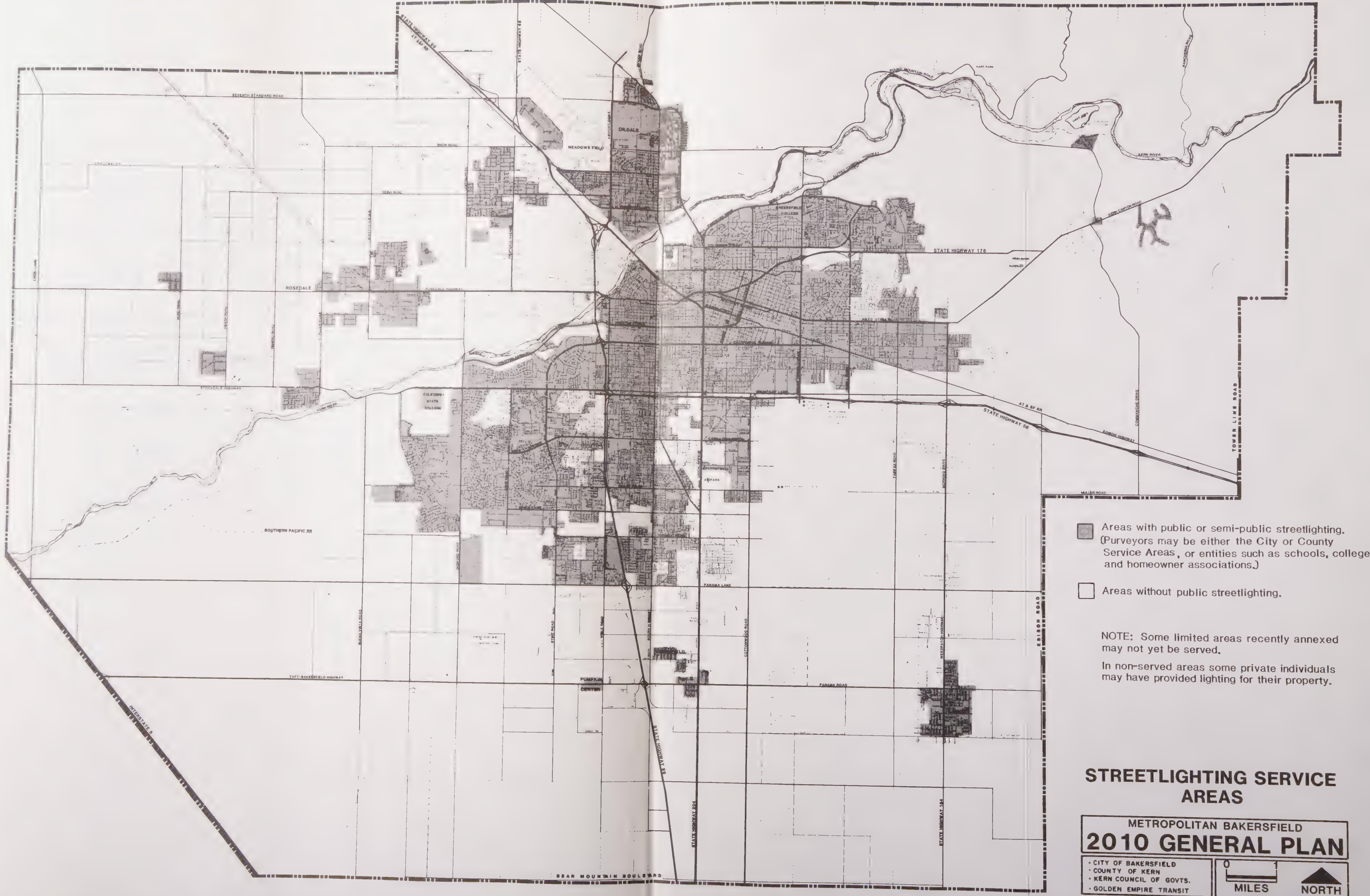
City policy requires street lights at intersections, and at midblock where blocks are greater than 600 feet in length, with the exception of some industrial areas in which street lights are required only at intersections.

PG&E's monthly rates vary depending on the type and intensity of the lamp and on whether they install, own and maintain the streetlight and post.

The City of Bakersfield has a PG&E billing account for 6,211 active lights and 770 temporarily de-energized lights. Most street lights in the city and almost all street lights in the county are provided under PG&E's LS-1A or LS-1C rates. In the former, PG&E installs, owns and maintains the entire street light. In the latter the pole and support arm are installed and owned by the city with PG&E maintaining it.

Recently the city has been having new street lights provided under the LS-2A rate schedule. Under this schedule, PG&E provides only the energy, with the city being responsible for installation and maintenance. The difference in these monthly rates for a typical high pressure 5,800 lumen sodium lamp is shown below.









L5-1A	L5-1C	LS-2A
\$6.191	\$5.108	\$2.480

In new developments the city itself does not install street lights. Rather, the city requires developers to install lights and dedicate them to the city. Lights are often required for newly annexed areas or if an additional street light is warranted in an existing developed area of the city. In these circumstances, the city authorizes PG&E to install the light under the LS-1A schedule. Within the county, all street lights are provided under the LS-1A schedule.

The city has adopted standards for street lights. The county, while requiring street lighting for all Type A subdivisions, has no adopted standards.

#### STREET LIGHTING ISSUES

Adequate lighting of public streets and grounds is a deterrent to crime and assists in accident prevention. The following issues have been identified with respect to public lighting in the planning area:

- All new development in the planning area does not install lighting in accord with the same spacing and equipment standards.
- Lighting costs currently represent a significant burden on local agency budgets when financed from general funds.
- All presently developed portions of the planning area do not have adequate public lighting.
- Public grounds are not adequately lighted.



GOALS AND POLICIES

The following presents the goals and policies for street lighting in the planning area. Implementing programs are contained in the following subsection. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1 Provide uniform and adequate public lighting for all developed and developing portions of the planning area.
- 2 Develop uniform planning area street light location and design standards.
- 3 Establish a benefit-related financing mechanism for all planning area public lighting to minimize lighting costs.
- 4 Develop financing mechanisms which will permit the installation of public lighting in developed portions of the planning area not adequately lit at present.
- 5 Provide for adequate lighting on public grounds where night use is encouraged.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1 Achieve consistency between current city standards and county policies for lighting in new development (I-1).
- 2 Utilize existing state law-based assessment procedures in a uniform manner for public lighting financing (I-4).
- 3 Complete the conversion of all planning area lighting to energy efficient lighting (I-2, I-5) .
- 4 Require developers to install street lighting in all new developments in accord with adopted city standards and county policies (I-2).
- 5 Finance and develop appropriate design standards for, and installation of, public grounds lighting in accord with this policy (I-5, I-6, I-7).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Public Services and Facilities Element affecting street lighting. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1      Develop, at city and county staff levels, mutually agreed upon standards for lighting location design, and development-related installation, for legislative body approvals. Such standards shall include the provision of standardized, modern, lights at all intersections and in mid-block where blocks exceed 600 feet in length.
- 2      Utilize existing ordinance authority, or adopt and enforce new ordinances, to require developer installation of standard design street lighting in all new development.  
  
Non-standard street lighting may be permitted to enhance the neighborhood character of an area or uniqueness of a site providing such lighting exhibits low-operating costs, is energy efficient, and provides adequate light.
- 3      Continuously evaluate, at staff level, the most cost-effective selection of public agency/utility street lighting ownership and maintenance.
- 4      Use the Landscaping and Lighting Act of 1972, or similar legislative authority, for street lighting financing in the planning area, adopting consistent area-wide assessment formulas.
- 5      Request serving utility companies to complete conversion to low maintenance, low cost, and energy efficient lighting for utility-owned facilities and direct the conversion of all remaining publicly owned facilities in the planning area.
- 6      Use the Landscaping and Lighting Act of 1972, or similar legislative authority, to authorize the installation and subsequent operations financing of adequate lighting in all developed areas not now so lighted, after required public hearings.
- 7      Develop, at city and county staff level, mutually agreed upon standards for public grounds lighting. Finance the installation of such lighting on publicly-accessible city and county grounds from general funds or lighting maintenance districts; request similar installations and financing of all other public agencies with publicly-accessible grounds in the planning area.

## F. SOLID WASTE

OVERVIEW OF EXISTING CONDITIONS

## EXISTING SERVICES

Solid waste collection services (residential and commercial) are provided within the city by the City Sanitation Division and contracted private haulers and in the unincorporated area by a county franchise hauler. All solid waste generated in the area is disposed of in county-operated landfills.

The study area currently (1988) generates approximately 590,000 tons per year of solid waste and is expected to generate about 986,000 tons per year in 2010.

The China Grade Landfill is the primary landfill serving the 2010 study area, but substantial use is made of the Arvin Landfill. The China Grade facility has been used continuously since 1983, although it had been used prior to 1974 for landfill and burning dump purposes. Capacity at the China Grade site is expected to be reached in 1992. Once this site reaches capacity, the Metropolitan Bakersfield Municipal Landfill at Bena will become operational. The "Bena" landfill is located approximately 18 miles east of Bakersfield and has a projected 65-75 year lifespan with a capacity of 70 million cubic yards.

A recycling/transfer station subcommittee comprised of representatives of recycling industry, franchise haulers, city and county government and environmental organizations is conducting a feasibility study on the siting of a Metropolitan Bakersfield Transfer Station to become operational coincidentally with the "Bena" landfill. The Metropolitan Bakersfield Transfer Station would be designed and located to enhance recycling opportunities and to decrease illegal dumping.

SOLID WASTE ISSUES

Adequate solid waste disposal is vital to the health of residents of the planning area. The following issues have been identified with respect to solid waste disposal:

- ° Resource recovery, in conjunction with landfill usage, is being encouraged by state and federal government agencies and by some citizens.
- ° The "Bena" landfill has adequate capacity to serve the needs of the planning area.
- ° Siting of the Bakersfield Metropolitan Transfer Station.



GOALS AND POLICIES

The following presents the goals and policies for solid waste disposal in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

## GOALS

- 1        Ensure the provision of adequate solid waste disposal services to meet the demand for these services in the planning area.
- 2        Evaluate, and develop as feasible, resource recovery and recycling systems.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1        Comply with, and update as required, the adopted county solid waste management plan (I-1, I-2, I-3, I-4).

IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Public Services and Facilities Element affecting solid waste. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1      Implement the "Kern County Solid Waste Management Plan-1988", and subsequent updates which will make the Metropolitan Bakersfield Municipal landfill at Bena available to the 2010 study area.
- 2      Site and construct Bakersfield metropolitan transfer stations with appropriate land use buffers where appropriate.
- 3      Evaluate the feasibility of recovering methane gas from non-operational public landfill sites.
- 4      Undertake, as economically feasible, materials recycling programs and the construction of resource recovery facilities, utilizing private/public partnerships when possible.









# CHAPTER XI – PARKS ELEMENT

## STATUTORY REQUIREMENTS

The Parks Element is an optional element of the General Plan in accordance with California Government Code Section 65303. Cities and counties often prepare them due to the concerns of providing sufficient park land for residents, establishing a relationship between park space and the city's entire open space resource, and development.

The Parks Element sets policies and minimum standards for the amount and quality of land devoted to parks. Park land is generally defined as any usable area of land or water designated on state, regional or local open space plans as open space or park land and is actively used for park and/or leisure recreational purposes with or without charge.

## OVERVIEW OF EXISTING CONDITIONS

Parks are generally categorized as either local or regional. Local parks generally range from 1-2.5 acres (mini-parks), to 5-10 acres (neighborhood parks), and approximately 30 acres (community parks). Local parks generally serve a population within a three-quarter mile radius. Regional parks, on the other hand, can range anywhere from 20 to 1,000 acres and serve a population living within one hour's distance. The Park Classifications and Standards section discusses specific policies which establish minimum acreage requirements, utilization, and typical development improvements.

Historically, park facilities within the planning area have been supplied by the City of Bakersfield, the County of Kern, the North Bakersfield Recreation and Park District, Bear Mountain Recreation and Park District, school districts, colleges, and, most recently, private developers. The provision of regional parks has been primarily the responsibility of the County of Kern.

Figure XI-1 shows the location of all public parks in the planning area, including local and regional parks. Table XI-1 provides an inventory of acreages and facilities at all of these locations.

## PARK RESOURCES

### 1. Local Parks

The data from a 1984 park plan study conducted by the City of Bakersfield reveals that there is a shortage of local parks in the metropolitan area. The parks-to-population ratio (based on the 1980 Census figure) is 4.83 acre per 1,000, compared to the National Parks and Recreation Association standard for local parks of 6.25-10.5 acres per 1,000. It is important to note that the figure of 4.83 acres/1,000 includes school facilities that are made available for public recreation. As the following table reveals, the park shortage is particularly acute with respect to community parks:





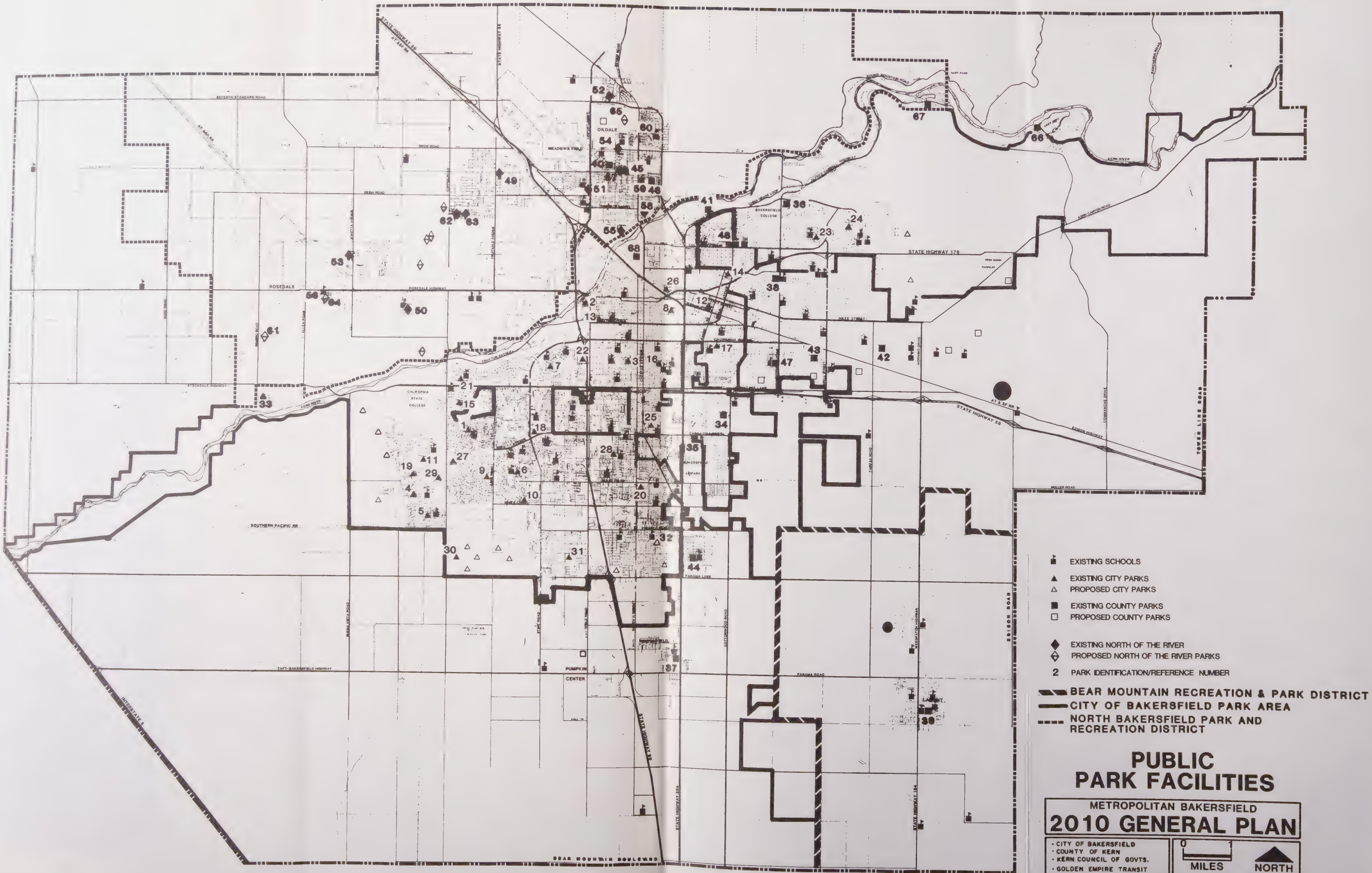






TABLE XI-I  
EXISTING  
PUBLIC PARKS  
AND FACILITIES

FIGURE XI-1 NO.		ACRES	AUDITORIUM/STAGE	SOFTBALL BACKSTOP(S)	BOATING	CAMPING	GAME COURTS	HORSEHOE/SHUFFLEBOARD	LAKE WITH SWIMMING	OPEN TURF	PICNIC FACILITIES	PLAYGROUND &/OR PLAY EQUIPMENT	RECREATION BUILDING	RESTROOMS	SWIMMING POOL/ OUTDOOR WADING POOL	TENNIS COURTS
EXISTING CITY PARKS																
1.	AMBERTON PARK	1	2.70							X	X	X		X		
2.	BEACH PARK	2	27.60					X		X	X	X		X	X	
3.	BEALE PARK	3	6.86	X			X	X		X	X	X		X		X
4.	CAMPUS PARK NORTH	4	8.00							X	X	X				
5.	CAMPUS PARK SOUTH	5	12.00							X	X	X				X
6.	CASTLE PARK	6	4.20							X	X	X				
7.	CENTENNIAL PARK	7	9.67				X	X		X	X	X		X		X
8.	CENTRAL PARK	8	10.62	X						X	X	X		X	X	
9.	CORVALLIS PARK	9	5.50							X	X	X				
10.	GRISSOM PARK	10	12.00				X			X	X	X			X	
11.	HAGGIN OAKS PARK	11	10.00							X	X	X				
12.	INTERNATIONAL SQUARE	12	0.63							X	X					
13.	JASTRO PARK	13	9.24	X			X	X		X	X	X		X	X	X
14.	JEFFERSON PARK	14	8.55	X			X	X		X	X	X		X	X	X
15.	KROLL PARK	15	4.39							X	X	X				
16.	LOWELL PARK	16	9.23				X			X	X	X		X		
17.	MARTIN LUTHER KING JR. PARK	17	12.88	X			X			X	X	X	X	X	X	X
18.	PATRIOTS PARK	18	20.00				X			X	X	X		X	X	
19.	PIN OAKS PARK	19	16.80				X			X	X	X		X	X	
20.	PLAINZ PARK	20	8.12				X	X		X	X	X		X	X	
21.	QUAILWOOD PARK	21	5.55							X	X	X				
22.	SAUNDERS PARK	22	11.49				X	X		X	X	X		X	X	X
23.	SIEMON PARK	23	9.07				X			X	X	X		X	X	
24.	UNIVERSITY PARK	24	11.50							X	X	X		X	X	
25.	WAYSIDE PARK	25	14.32				X			X	X	X		X	X	X
26.	WEILL PARK	26	1.87							X	X	X				
27.	WESTWOLD PARK	27	4.40							X	X	X		X		X
28.	WILSON PARK	28	8.40	X						X	X	X				
29.	GARDEN PARK	29	5.80							X	X	X				
30.	WILDERNESS PARK	30	5.20							X	X	X				
31.	CHALLENGER PARK	31	5.00				X			X	X	X				
32.	GREENFIELD/MONITOR	32	5.00							X	X	X				
33.	JENKINS ROAD PARK	33	3.24							X	X	X				
EXISTING COUNTY PARKS																
34.	BELLE TERRACE	34	10.00								X	X		X		
35.	CASA LOMA	35	10.00								X	X		X		
36.	COLLEGE	36	15.00											X		
37.	GREENFIELD	37	5.00								X	X		X	X	
38.	HERITAGE	38	23.00								X	X		X	X	
39.	LAMONT	39	7.00								X	X		X	X	
40.	McGRAY	40	2.00								X	X				
41.	PANORAMA	41	38.00								X	X				
42.	PIONEER	42	10.00							X	X	X		X		
43.	POTOMAC	43	5.00								X	X		X		
44.	REXLAND ACRES	44	5.00								X	X		X		
45.	SEARS	45	3.00								X	X				
46.	STANDARD	46	15.00							X	X	X		X	X	
47.	VIRGINIA AVENUE	47	9.50							X	X	X		X		
48.	WILKINS PARK	48	2.60								X	X				
EXISTING NORTH BAKERSFIELD PARKS																
49.	FRUITVALE - NORRIS	49	20.30					X		X	X	X		X	X	X
50.	GREENACRES	50	10.40							X	X	X		X	X	
51.	NORTH BEARDSLEY	51	7.00							X	X	X		X	X	
52.	NORTH HIGHLAND	52	10.00				X			X	X	X		X		
53.	NORTH ROSEDALE	53	15.40							X	X	X		X	X	
54.	N.O.R. OFFICE	54	3.10							X	X	X		X	X	
55.	RIVERVIEW	55	16.90				X	X		X	X	X		X	X	
56.	ROSEDALE SCHOOL GYM	56												X	X	
57.	SEARS PRESCHOOL	57												X	X	
58.	SENIOR ADULT CENTER	58	4.40					X		X				X		
59.	STANDARD SCHOOL	59	1.50				X							X		
60.	HIGHLAND SCHOOL	60	5.00							X						
61.	BRIMHALL ROAD PROPERTY	61	10.00													
62.	OLIVE PARK WEST	62	2.50				X			X		X				
63.	OLIVE PARK EAST	63	2.50				X			X		X				
64.	ROSEDALE PARK SITE	64	17.00													
65.	NORTH MEADOWS SITE	65	10.00													
COUNTY REGIONAL PARKS																
66.	KERN RIVER COUNTY PARK	66	642.00		X	X					X	X	X	X		
67.	HART MEMORIAL COUNTY	67	370.00			X				X		X		X		
68.	METRO RECREATION CENTER	68	107.00	X												





<u>Local Park Type</u>	<u>Metropolitan Area</u>	<u>National Standard</u>
Mini-parks	.18 AC/1,000	.25-.5 Ac/1,000
Neighborhood Parks	1.99 AC/1,000	1-2 Ac/1,000
Community Parks	2.66 AC/1,000	5-8 AC/1,000

The 1984 park plan study identified areas within its study area which are deficient in parks. The criteria used for determining these deficiencies is a standard used by the city which prescribes that parks be within three-quarters of a mile of residents that they are intended to serve. In a few instances, radii of less than three-quarters of a mile were used where small parks had few or no facilities. The areas impacted by a local park shortage include: a) an area that flanks the western side of State Highway 99 between State Highway 58 and Pacheco Road; b) areas in the urban south-east between State Highway 99 and Cottonwood Road, south of Planz Road; c) an area in the urban northeast bounded roughly by Interstate 178 on the north, Niles Street on the south, Mt. Vernon Avenue on the west, and Fairfax Road on the east.

## 2. Community Park Centers

A community park center is defined as an outdoor and indoor recreational facility providing large spaces for a wide range of organized community meeting and sports activities. The national standard for community parks and/or centers is 1 per 25,000 population. With an estimated 1985 population of 285,950, the planning area contains only two recreational centers, Martin Luther King, Jr. Community Center and Riverview Community Center. Smaller meeting room facilities do, however, exist at Greenacres, Heritage, Belle Terrace, Rexland and Sears Parks.

## 3. Regional Parks

The planning area's two regional parks, Kern River County Park and the Metro Recreation Center, provide a combined 1,119 acres of regional recreation space. This represents a ratio of about 4 acres per thousand population, which is considered adequate. Other regional parks located outside the planning area, including Buena Vista Aquatic Recreation Area and Tehachapi Mountain Park serve planning area residents.

## PARK CLASSIFICATIONS AND STANDARDS

Development under the following park classifications and standards would address spatial and topographical requirements, land availability, types of improvements, service area, funding and maintenance costs. Local parks are to be developed at a minimum rate of 2.5 usable acres per 1,000 population. "Usable" means area that people can use with an emphasis on active and group use. It includes essentially flat land that can be developed for facilities and activity areas. It is not land in very steep slope, land with unusually poor soil conditions not suited for park development, land areas subject to periodic flooding, land with unique habitat worthy of preservation or water bodies unsuitable of park recreation uses or areas impacted adversely by adjacent or nearby land uses.



### 1. Mini-Parks

Mini-parks function as small neighborhood parks in residentially developed areas where neighborhood standards are not met and where acquisition of sufficient acreage for standard neighborhood facilities is prohibitive. The minimum size standard for public mini-parks is 2.5 usable acres. Mini-parks may also be located in areas to serve commercial uses. Development improvements of mini-parks would typically consist of playground or tot lot area and equipment, picnic tables, barbecues, fountain, landscaping and security lighting.

### 2. Neighborhood Parks

Neighborhood parks provide both active and passive recreational activities for surrounding residential developments. The minimum site size standard for neighborhood parks is 6.0 usable acres. The location should provide adequate street frontage, parking and good accessibility. The service area covers the neighborhoods within three-quarters (3/4) of a mile of the park site. Development improvements include a variety of facilities including single and/or group areas, barbecues, fountains, playground area and equipment, tennis and/or game courts, open turf area, landscaping, parking and security lighting.

### 3. Community Park Centers

Community park centers provide a wide range of recreational opportunities, facilities and equipment servicing the population comprised of several neighborhood units. The park would typically have a service area of a 3 to 5 mile walking radius. Joint development and/or use with schools should be recommended. The minimum size standard for community parks is 20 usable acres. These parks may contain specialized facilities not found in other parks. Typical development includes indoor recreation facilities, group picnic areas, barbecues, fountains, playgrounds and equipment, tennis and game courts, softball diamonds with lighting and/or other athletic fields, swimming pool, landscaping, parking, security lighting and restrooms.

### 4. Regional Parks

Regional parks serve the population of a large region - usually within an hour travel time. The responsibility for these parks generally rest with a county, regional authority or state. Regional parks may range in size from 20 acres to 1,000 acres or more. Features typically found in regional parks include campgrounds, picnic areas, nature study areas and trail systems. In addition, a few of these parks may have scenic vistas, gardens, a golf course, sports fields, water features or be related to items of historical significance or special interest.

SIGNIFICANT ISSUES SUMMARY

Significant issues regarding the planning area's parks and recreation resources are as follows:

- ° In comparison to National Recreation and Park Association standards, there is a shortage of local parks in the planning area, particularly community parks.
- ° The planning area's image stands to benefit from greater attention to the design of parks and recreational facilities as well as from efforts to relate recreational facilities to the area's natural resources.
- ° Due to limited tax revenues, it has become increasingly difficult for local governments to provide local parks and recreational facilities.
- ° Inter-jurisdictional coordination should be improved in the provision of park and recreational services so that it results in more consistent standards and less duplication of effort.
- ° Some parks are supported by maintenance districts while others are supported by the general fund.

GOALS AND POLICIES

The following presents the goals and policies for parks in the planning area. Implementing programs are contained in the following sub-section. At the end of each policy is listed in parenthesis a code beginning with the letter "I" followed by a number. This code refers to the pertinent implementing program.

GOALS

- 1 Provide parks and recreation facilities to meet the planning area's diverse needs.
- 2 Supply neighborhood parks and community facilities (including school facilities) at a minimum of five acres per 1,000 persons throughout the plan area.
- 3 Provide four acres of park and recreation space for each 1,000 persons (based on the most recent census) for general regional recreation opportunity as a minimum standard.
- 4 Provide a diversity of programs and facilities to meet the needs of the full range of citizen groups including the elderly, handicapped, and economically disadvantaged.
- 5 Coordinate development of park facilities and trail systems throughout the plan area which enhance the centers concept and complement unique visual or natural resources.
- 6 Ensure that all park and recreation facilities are adequately designed, landscaped, and maintained.
- 7 Require that the costs of park and recreation facilities and programs are borne by those who benefit from and contribute to additional demand.
- 8 Provide safety, accessibility, and compatibility between parks and adjacent residential areas through "good neighbor" park practices.
- 9 Coordinate efforts by volunteer agencies, civic organizations, private enterprise and all government entities to assure the provision of a complete range of recreation opportunities for all residents of the planning area.

## POLICIES

Goals will be achieved through the following policies which set more specific directions and guide actions.

- 1      Require that neighborhood parks be developed at a minimum rate of 2.5 acres per 1,000 population. This requirement may be met all or in part by on-site recreation for such developments as P.U.D.s. The City of Bakersfield may continue to allow up to .7 acres per 1,000 population credit for on-site recreation development in P.U.D.s, open spaces, publicly owned lands or utility rights-of-way to meet the neighborhood park requirement (I-9).
- 2      Allow the formation of special park districts which provide higher park standards than the minimum stated in Policy 1 (I-1).
- 3      Require developers to dedicate land, provide improvements and/or in-lieu fees to serve the needs of the population in newly developing areas (I-1).
- 4      Require developers of new subdivisions to show and adhere to park locations on adopted master plan. Park locations identified in master plans approved prior to adoption of this general plan are reflected in this plan. Variations may be allowed based on certain constraints. See Policy 6 (I-9).
- 5      Establish as a target that mini-parks and neighborhood parks within the City of Bakersfield jurisdiction be situated within three-quarters of a mile of residents they are intended to serve (I-9).
- 6      Provide additional neighborhood and community parks and recreation acreage in areas substantially developed or in the process of redevelopment or improvement, using a combination of public funds, in lieu developers fees, and benefit assessment districts (I-1).
- 7      Provide mini-parks in developed residential areas where neighborhood standards are not met and where it is impossible to acquire sufficient acreage for neighborhood facilities. Use the same funding mechanisms indicated in Policy 6 (I-1).
- 8      Require the following minimum site size standards in planning and acquiring of local parks and playgrounds:  

Mini parks (public)	- 2.5 usable acres
Neighborhood parks/playgrounds	- 6.0 usable acres
Community park/playfield	- 20.0 usable acres



Variations may be allowed based on constraints, such as, land availability, natural obstacles, financing, funding and maintenance costs. The above acreage figures apply to usable acreage. Usable means an area that people can use with an emphasis on active and group use. It is essentially flat land that can be developed for facilities and activity areas. It is not land steeper than 4 feet horizontal and 1 foot vertical in slope, land with unusually poor soil conditions, land subject to flood water stagnation, land with riparian or otherwise unique habitat worthy of preservation or water bodies or areas impacted adversely by adjacent or nearby land uses (I-9).

- 9 Allow neighborhood park requirements to be met by community parks when community parks are situated within or at the boundaries of neighborhoods and when they provide equivalent facilities (I-9).
- 10 Encourage schools to make playgrounds and playfields available to local residents after normal school hours and on weekends (I-7).
- 11 Evaluate the feasibility of using publicly-owned lands and utility rights-of-way as recreational facilities (I-10).
- 12 Encourage development and maintenance of regional parks and recreational facilities through the cooperation of the City of Bakersfield, the County of Kern, the North Bakersfield Recreation and Park District and the Bear Mountain Recreation District (I-8).
- 13 Evaluate the feasibility of including new regional parks as a component of proposed groundwater recharge areas (I-10).
- 14 Plan for and expand regional recreation opportunity in connection with the development and conservation of appropriate areas along the Kern River (I-4, I-8).
- 15 Designate multiple purpose areas for recreation and park use within the Kern River Plan area and in accordance with the goals and policies in the Kern River Plan Element (I-4).
- 16 Accommodate social, cultural and ethnic needs in the design and programming of recreational spaces and facilities (I-2).
- 17 Attempt to locate parks and design facilities to meet the needs of all population segments including children, seniors and handicapped (I-2).
- 18 Attempt to provide special recreational programs for seniors on fixed incomes, latch-key children, and the economically disadvantaged (I-2).

- 19 Locate and design local park and recreation areas for access to all age groups where practicable. Provide facilities for both active (play areas and courts) and passive (turf, walkways, trees and picnic facilities where possible) recreational activity (I-2).
- 20 Operate programs at times convenient to the users (I-2).
- 21 Establish both passive and active park development in local parks to accommodate programmed activities and drop-in use. Some usable area should be held as open turf for free play (I-3).
- 22 Attempt to provide and promote the use of alternative public funding for the acquisition, development and maintenance of parks and recreational facilities in low and moderate income neighborhoods in which there is a recognized shortage of parks (I-1).
- 23 Encourage the development of parks adjacent to schools in order to provide a wider range of programs (I-7).
- 24 Monitor program needs through surveys of neighborhood residents or other participation mechanisms and through periodic reviews of park and recreational needs (I-2).
- 25 Promote the preservation of existing parks and encourage the development of other facilities near downtown (I-8).
- 26 Encourage the development of a trail system for hiking, equestrian and bicycling purposes (I-11).
- 27 Encourage pedestrian and bicycle linkages between residential and commercial uses (I-11).
- 28 Encourage the establishment of equestrian trails where they link residential development to the Kern River in areas of the northeast and northwest where horses are permitted by zoning (I-2, I-11).
- 29 Design equestrian trails, hiking and bicycling rights-of-way to minimize user conflicts between them (I-2, I-11).
- 30 Evaluate the feasibility of using utility easements for recreational activity (I-10).
- 31 Establish a program of design and improvement review, landscape development, and maintenance of parks, city and county building grounds and public works projects, with quality standards established commensurate with intended function and relative impact on surrounding area (I-3).
- 32 Encourage variety in the design of park facilities to enhance the lifestyle of residents to be served (I-2, I-3).

- 33 Implement the parkland dedication ordinance with in-lieu fee provisions (I-1).
- 34 Encourage coordination in the acquisition, development and use of parks and schools to avoid duplication of facilities and provide economic use of public funds (I-3, I-5).
- 35 Encourage the development of recreation programs by public agencies and sports organizations to involve more children and adults in outdoor recreation activity. Use volunteers to operate and maintain programs whenever possible (I-2).
- 36 Adopt and implement an official park acquisition program to meet current and future needs. Such a program should include direct input for capital budgeting purposes including the scheduling of park dedication. The program should also be reviewed periodically with respect to changing growth rates and general plan policies (I-1).
- 37 Establish a formal mechanism by which the city may accept gifts and dedications of parks and open space (I-1).
- 38 Consider the use of eminent domain where siting of a park is required to serve neighborhood needs for parks and recreation facilities (I-1).
- 39 Consider the formation of Community Facilities Districts, especially in newly developing areas\* (I-1).
- 40 Consider the use of special taxes\*\* for financing services or facilities (I-1).
- 41 Provide for the creation of benefit assessment districts for park acquisition, development and maintenance. These districts should conform as closely as possible to benefit service areas (I-1).
- 42 Encourage a community-wide parks and recreation district to equitably distribute support for the park system (I-1, I-6).

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\* The Mello-Roos Community Facilities Act of 1982 authorizes local governments to levy special taxes within newly created Community Facilities Districts. The Act also authorizes local governments to issue bonds backed by these special taxes. Funds may be used to pay for capital facilities, including parks. Community Facilities Districts are established by a two-thirds vote of the residents of the proposed district.

\*\* Special taxes are taxes collected and earmarked for a special purpose, such as a particular kind of service or facility, rather than being deposited in the general fund. For capital acquisition, such as parkland, the Mello-Roos Act provides the most practical way to levy a special tax. Under Proposition 13, the levy of a special tax requires support from two-thirds of the affected voters.



- 43 Encourage the development of private and commercial recreation facilities under lease or concession agreements where such facilities are consistent with planned development and offer expanded recreation opportunities to the public (I-2).
- 44 Study the feasibility of a recreation and land management program allowing for the generation of supplemental revenue to offset the cost of necessary further land acquisition, development and operational cost. This could include establishing concessions, rentals user fees and land leases (I-10).
- 45 Develop lighted playing fields on community park sites (I-3).
- 46 Permit major traffic generating activities on community park sites only (I-3).
- 47 Community parks should be located adjacent to or near arterials. Neighborhood parks should be located adjacent to collector or local streets, rather than arterial streets (I-1, I-3). (CC 11/6/91)
- 48 Situate swimming pools near high schools, wherever possible, and with convenient access to elementary schools (I-3).
- 49 Design vegetation, earth form and activity areas to buffer noise, light, etc., from adjacent residents (I-3).
- 50 Allow the physical integration of canals in park areas where design measures can be incorporated to ensure public safety (I-3).
- 51 Enforce all regulations regarding public safety, littering and drinking in public parks (I-6).
- 52 Ensure that all park facilities be developed consistent with policies in applicable planning documents and elements of the General Plan (I-8).
- 53 Coordinate the provision of park facilities with other public services and facilities, especially schools and public roads (I-7, I-8).
- 54 Coordinate the location, planning, and functional uses of all park and recreational facilities with affected local governmental entities and where feasible, promote joint acquisition and/or development to assure effective coverage of all needs (I-8).
- 55 Seek out and encourage the provision of volunteer assistance from civic organizations, special interest groups, and individuals to provide program leadership or facility development to augment recreation opportunities (I-2).



IMPLEMENTATION

The following are programs to be carried out by the City of Bakersfield and County of Kern to implement the goals and policies of the Parks Element. This listing is not to limit the scope of implementation of this plan. State law requires that planning agencies recommend various methods of implementation of the general plan as part of their on-going duties.

- 1 Establish and implement an official park acquisition program to meet current and future needs. Such a program shall include the following actions:
  - a) Establish a mechanism to identify potential park sites.
  - b) Identify funding strategies to pay for acquisition of new parks with funds reserved from the following sources.
    - City and County General Funds
    - Tax increment funds (in redevelopment project areas)
    - Developer assessments (through use of Quimby Act or other similar funding mechanisms)
    - Business and fund-raising contributions
    - Mello-Roos Community Facilities Act
    - Special taxes
    - Benefit Assessment Districts
    - State and Federal grants and loans
    - Donations, endowments or trust funds
  - c) Implement a parkland dedication ordinance with in-lieu fee provisions where developers contribute on a per unit basis.
  - d) Establish a dedication program where gifts of parkland and/or recreational facilities may be accepted.
  - e) Consider the use of eminent domain only where there is insufficient vacant land and where the need for parks and recreation facilities has been identified.
  - f) Establish the administrative and legal mechanisms to allow for the creation of benefit assessment districts, community facilities districts, and special taxes, particularly for the development of community centers.

- g) Utilize general funds for park acquisition, development and maintenance in the following instances:
    - Where developer's fees and grant funds are insufficient to purchase land for parks;
    - Where residents of low income areas cannot afford to contribute to benefit assessment districts for acquisition, development or maintenance.
  - 2 Consider recreational programming opportunities when developing park sites.
    - a) Work with the private sector to promote: a) the development of more outdoor recreation and sports programs for children and adults; and b) the development of private and commercial recreation facilities under lease or concession agreements.
    - b) Communicate with civic organizations, special interest groups, and individuals to seek volunteer program leadership.

In evaluating programs, include the following:

    - Periodic reports on level of service and service demand at existing facilities;
    - Periodic public hearings regarding the adequacy of parks and recreation services and facilities;
    - Periodically, do community surveys and market analyses to assess needs and demands.  - c) Investigate the feasibility of adopting Master Trail System.
- 3 Establish a program of design and improvement review, landscape development, and maintenance of parks, recreational buildings, and community facilities.
- 4 Follow procedures outlined in the Kern River Plan Element for designating multiple purpose areas for recreation use within the Kern River Plan area.
- 5 Review park and recreational facility proposals and programs on a regular basis to ensure complementary--as opposed to duplicative--services, programs, and facilities.
- 6 Work with the police and sheriff's departments to promote enforcement of all laws regarding public safety, littering and drinking in public parks.

- 7 Meet with school districts to discuss possible joint use of school facilities for public recreation.
- 8 Discuss with all appropriate government agencies the possible establishment of an interjurisdictional body whose function is to:
  - a) Coordinate the development and maintenance of parks and recreational facilities with other public services.
  - b) Monitor consistency of all planning documents which govern park and recreation development.
- 9 Modify the subdivision and building ordinances to:
  - a) Require that local parks be developed at a minimum rate of 2.5 acres per 1,000 population.
  - b) Allow developers (within the city) neighborhood park credit of up to .7 acres per 1,000 population for on-site recreational development in P.U.D.s, open space.
  - c) Require developers to show park locations on plans.
  - d) Establish as a target mini-parks and neighborhood parks within the City of Bakersfield's jurisdiction be accessibly located within three-quarters of a mile of residents they are intended to serve.
  - e) Require, where feasible, parks be developed with the following minimum acreage standards:

Mini-parks	2.5 usable acres
Neighborhood Parks	6.0 usable acres
Community Parks	20.0 usable acres;
  - f) Allow neighborhood park acreage requirements to be met by community parks when community parks are within or at boundaries of neighborhoods.
- 10 Conduct studies in order to evaluate the feasibility of the following:
  - a) The use of publicly-owned lands and utility rights-of-way as public open space.
  - b) The inclusion of new regional parks as a component of existing and proposed groundwater recharge areas.
  - c) A recreation and land management program allowing for the generation of supplemental revenue to offset the cost of necessary further land acquisition, development, and operational costs.

- 11 Update and implement the Bikeways Master Plan adopted by the City of Bakersfield and County of Kern. Develop a concept plan for future hiking, bicycling and equestrian trail systems.









## **CHAPTER XII**

### **KERN RIVER ELEMENT (CHAPTER RESERVATION)**

City and County jurisdictions have a jointly adopted Kern River Plan Element (optional element). This element is not proposed for review or rewrite as part of the 2010 General Plan, but will be incorporated by reference upon adoption of the 2010 Plan.









## **CHAPTER XIII**

### **HISTORICAL RESOURCES ELEMENT (CHAPTER RESERVATION)**

The city is in the process of preparing a Historical Resources Element (optional element) for later incorporation into the 2010 Plan. This element will receive a separate review and adoption process.





**HMR**

**HIGH MEDIUM DENSITY RESIDENTIAL**

**COUNTY JURISDICTION:  $\leq 17.42$  D.U./NET ACRE**

**CITY JURISDICITON:  $> 7.26$  AND  $\leq 17.42$  D.U./NET ACRE**

**HR**

**HIGH DENSITY RESIDENTIAL  $> 17.42$  AND  $\leq 72.6$  D.U./NET ACRE**

## **COMMERCIAL**

**HC**

**HIGHWAY**

**GC**

**GENERAL COMMERCIAL**

**OC**

**OFFICE COMMERCIAL**

**MC**

**MAJOR COMMERCIAL**

**MUC**

**MIXED USE MAJOR/OFFICE COMMERCIAL**

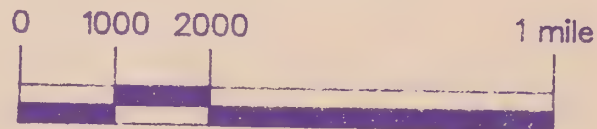
ATURE MINIMUM 20 ACRE PARCEL  
WILLIAMSON ACT: MINIMUM 80

AND MINIMUM 5 ACRE PARCEL

# POLITAN BAKERSFIELD ENERAL PLAN – WEST

RNMENTS

SCALE IN FEET



3-12-90

9-14-92

# KERN COUNTY GENERAL PLAN

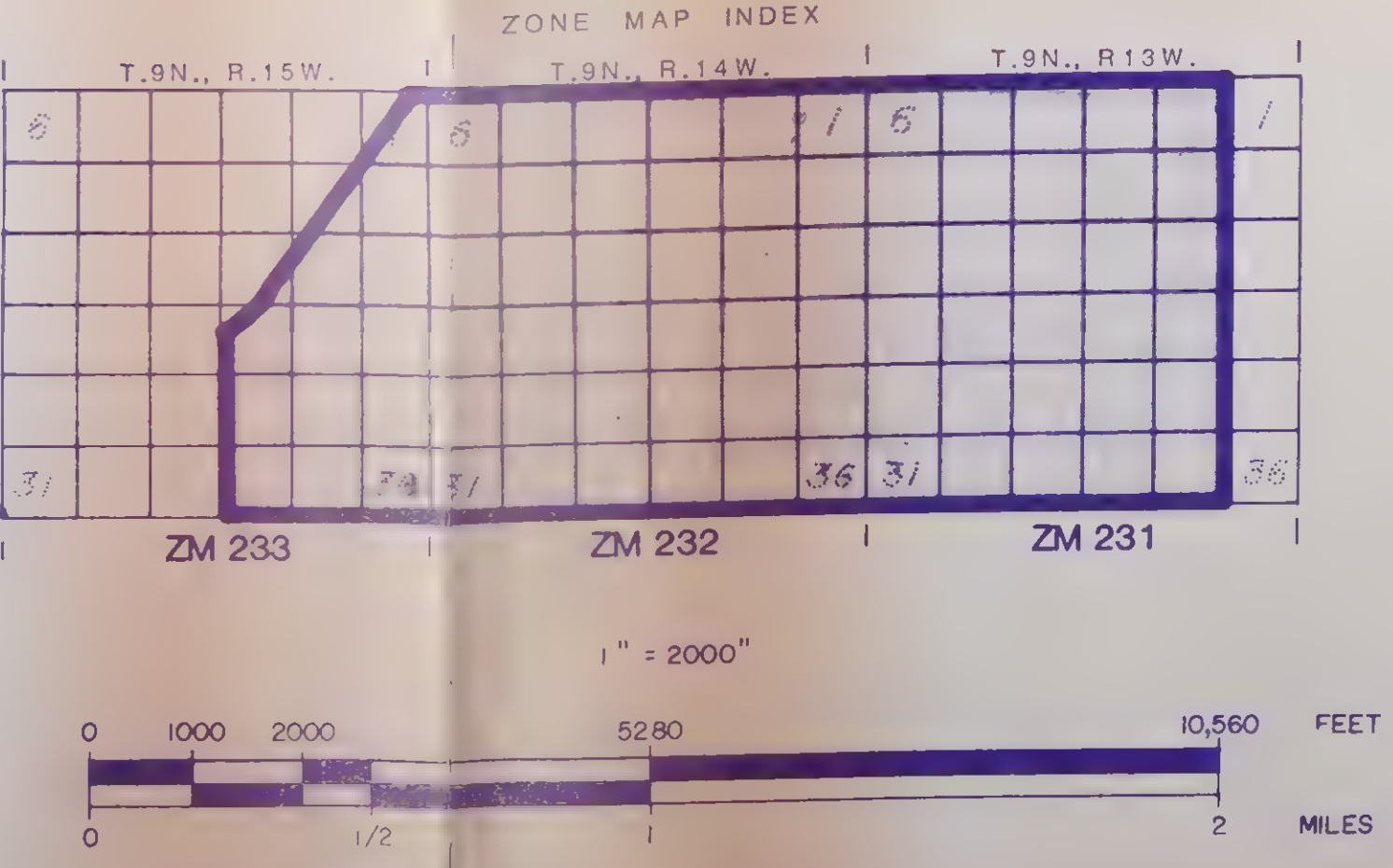
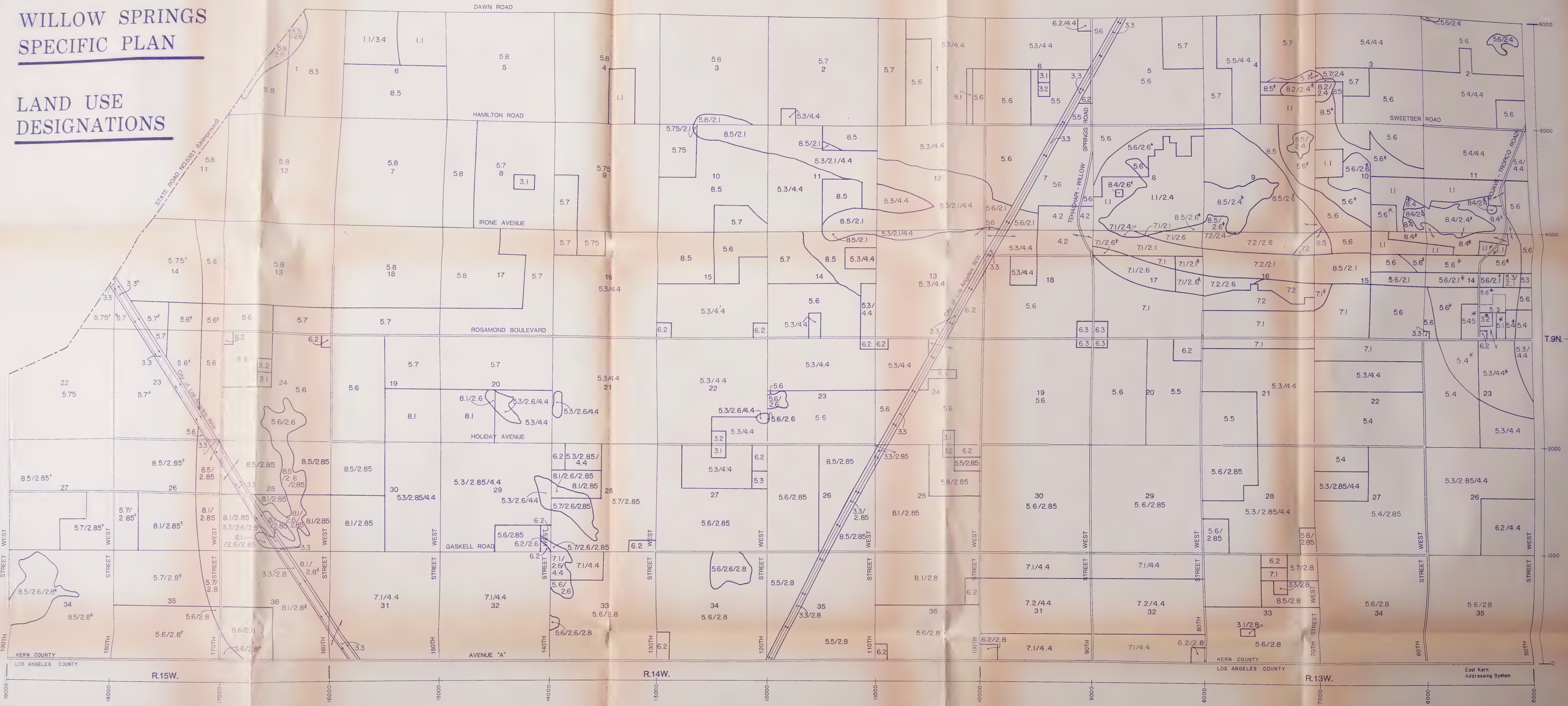
KERN COUNTY BOARD OF SUPERVISORS  
APRIL 15, 1982

## **TAFT PRIORITY AREA**



WILLOW SPRINGS  
SPECIFIC PLAN

LAND USE  
DESIGNATIONS



- 1. NON-JURISDICTIONAL LAND**
- 1.1 STATE OR FEDERAL LAND
- 2. PHYSICAL CONSTRAINTS OVERLAY**
- 2.1 SEISMIC HAZARD
  - 2.2 STEEP SLOPE
  - 2.3 FLOOD HAZARD
  - 2.4 SOIL EROSION
  - 2.5 MILITARY FLIGHT OPERATIONS (65db)
  - 2.6 MILITARY FLIGHT OPERATIONS (60db)
- 3. PUBLIC FACILITIES**
- 3.1 PUBLIC OR PRIVATE RECREATION AREAS
  - 3.2 EDUCATIONAL FACILITIES
  - 3.3 OTHER FACILITIES
  - 3.4 SOLID WASTE FACILITIES

- 4. SPECIAL TREATMENT AREAS**
- 4.2 RURAL COMMUNITY
  - 4.4 COMPREHENSIVE PLANNING AREA
- 5. RESIDENTIAL**
- 5.1 MAX. 29 UNITS/NET ACRE (1,502 SQ. FT. SITE AREA/UNIT)
  - 5.2 MAX. 16 UNITS/NET ACRE (2,722 SQ. FT. SITE AREA/UNIT)
  - 5.3 MAX. 10 UNITS/NET ACRE (4,356 SQ. FT. SITE AREA/UNIT)
  - 5.4 MAX. 4 UNITS/NET ACRE (10,890 SQ. FT. SITE AREA/UNIT)
  - 5.45 MAX. 2 UNITS/NET ACRE (21,700 SQ. FT. SITE AREA/UNIT)
  - 5.5 MAX. 1 UNIT/NET ACRE (43,560 SQ. FT. SITE AREA/UNIT)
  - 5.6 MIN. 2.5 GROSS ACRES/UNIT
  - 5.7 MIN. 5 GROSS ACRES/UNIT
  - 5.75 MIN. 10 GROSS ACRES/UNIT
  - 5.8 MIN. 20 GROSS ACRES/UNIT

- 6. COMMERCIAL**
- 6.1 MAJOR COMMERCIAL
  - 6.2 GENERAL COMMERCIAL
  - 6.3 HIGHWAY COMMERCIAL
- 7. INDUSTRIAL**
- 7.1 LIGHT INDUSTRIAL
  - 7.2 SERVICE INDUSTRIAL
  - 7.3 HEAVY INDUSTRIAL
- 8. RESOURCE**
- 8.1 INTENSIVE AGRICULTURE (MIN. 20-ACRE PARCEL SIZE)
  - 8.2 RESOURCE RESERVE (MIN. 20-ACRE PARCEL SIZE)
  - 8.3 EXTENSIVE AGRICULTURE (MIN. 20-ACRE PARCEL SIZE)
  - 8.4 MINERAL AND PETROLEUM (MIN. 5-ACRE PARCEL SIZE)
  - 8.5 RESOURCE MANAGEMENT (MIN. 20-ACRE PARCEL SIZE)

CERTIFICATE OF ADOPTION  
BY THE  
DIRECTOR OF PLANNING AND DEVELOPMENT SERVICES

By Resolution No. 92-148, the Kern County Board of Supervisors adopted this Specific Plan in this form on the 16th day of March, 1992, officially entitled the Willow Springs Specific Plan, after conducting a public hearing duly advertised, pursuant to all ordinance requirements of the County of Kern and its adopted General Plan.

Certified this 7TH day of APRIL, 1992.

*Ellen A. Dunsell*  
Director

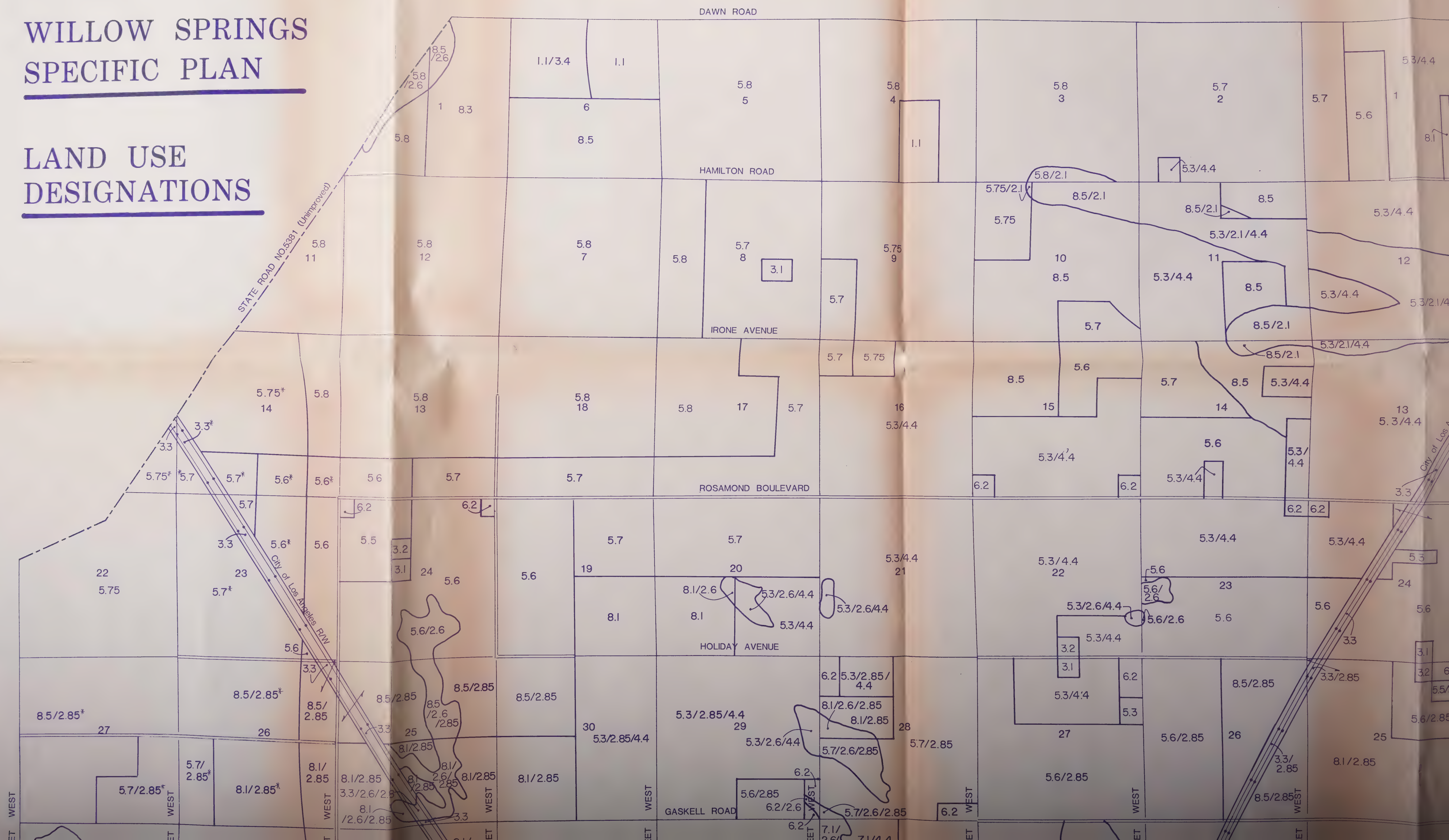
NOTE: The entire Willow Springs Specific Plan is subject to flooding (2.5 - Flood Hazard), except the areas denoted Non-Flood Hazard per the asterisk (\*).

AMENDMENTS:  
RESOL. 92-343, 6-8-92  
91-205, 3-18-91

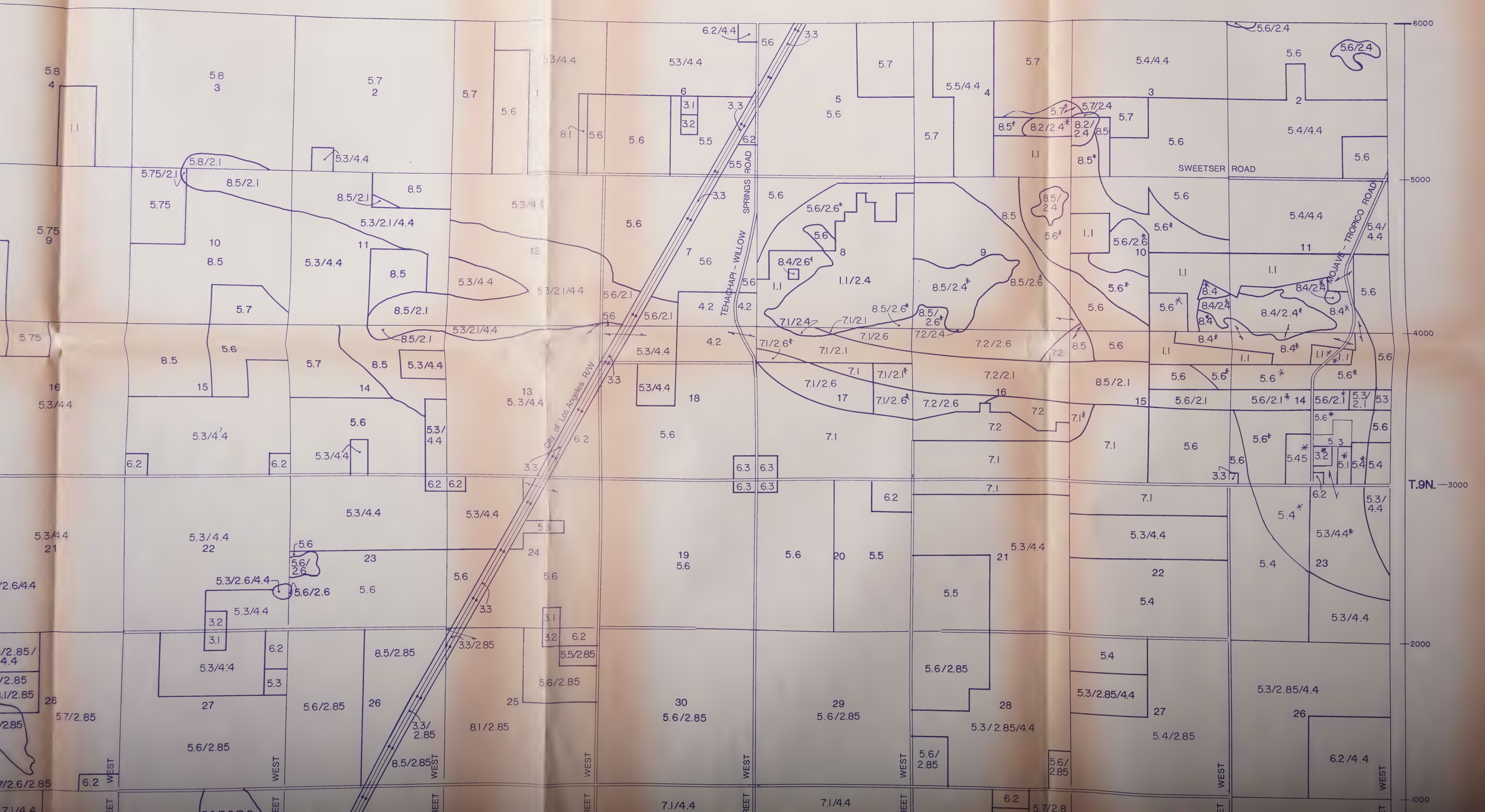


# WILLOW SPRINGS SPECIFIC PLAN

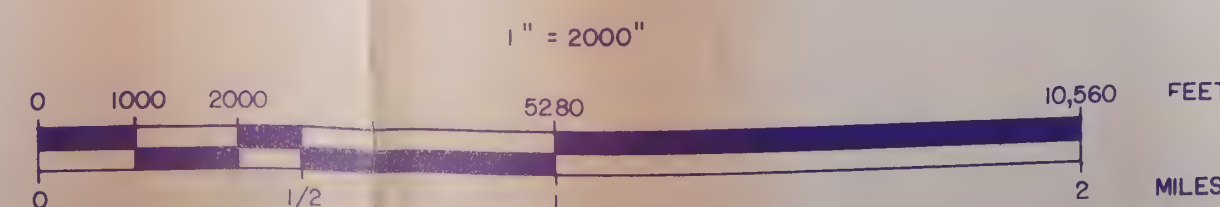
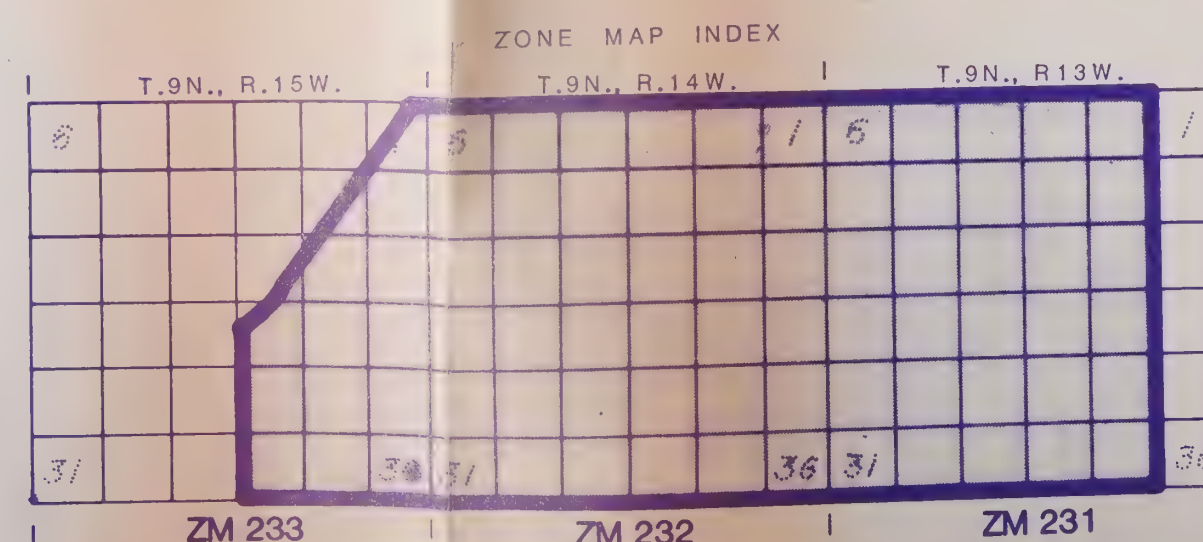
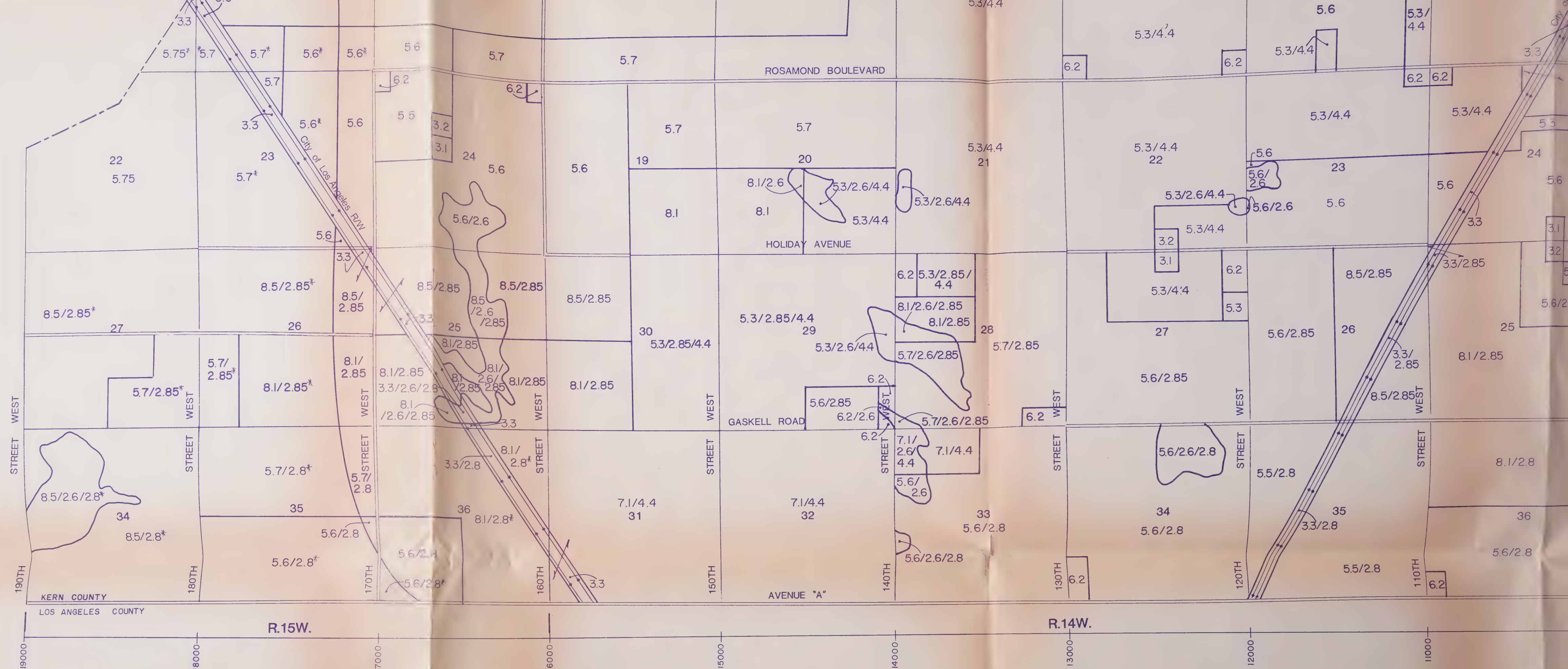
## LAND USE DESIGNATIONS











NOTE: The entire Willow Springs Specific Plan is subject to flooding (2.5 - Flood Hazard), except the areas denoted Non-Flood Hazard per the asterisk (\*).

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### 1. NON-JURISDICTIONAL LAND

- |     |                       |
|-----|-----------------------|
| 1.1 | STATE OR FEDERAL LAND |
|-----|-----------------------|

### 2. PHYSICAL CONSTRAINTS OVERLAY

- |      |                                   |
|------|-----------------------------------|
| 2.1  | SEISMIC HAZARD                    |
| 2.4  | STEEP SLOPE                       |
| 2.5  | FLOOD HAZARD                      |
| 2.6  | SOIL EROSION                      |
| 2.8  | MILITARY FLIGHT OPERATIONS (65db) |
| 2.85 | MILITARY FLIGHT OPERATIONS (60db) |

### 3. PUBLIC FACILITIES

- |     |                                    |
|-----|------------------------------------|
| 3.1 | PUBLIC OR PRIVATE RECREATION AREAS |
| 3.2 | EDUCATIONAL FACILITIES             |
| 3.3 | OTHER FACILITIES                   |
| 3.4 | SOLID WASTE FACILITIES             |

### 4. SPECIAL TREATMENT AREAS

- |     |                             |
|-----|-----------------------------|
| 4.2 | RURAL COMMUNITY             |
| 4.4 | COMPREHENSIVE PLANNING AREA |

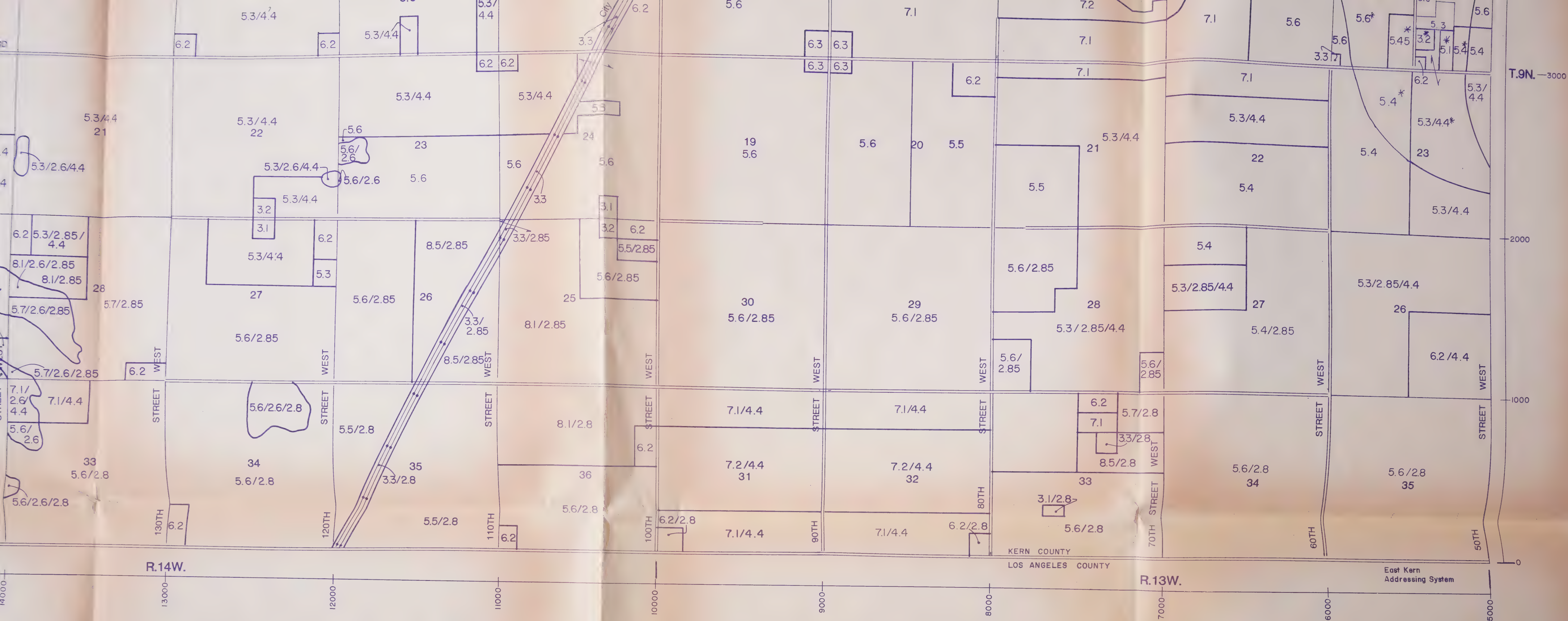
### 5. RESIDENTIAL

- |      |   |
|------|---|
| 5.1  | MAX. 29 UNITS/NET ACRE (1,502 SQ. FT. SITE AREA/UNIT) |
| 5.2  | MAX. 16 UNITS/NET ACRE (2,722 SQ. FT. SITE AREA/UNIT) |
| 5.3  | MAX. 10 UNITS/NET ACRE (4,356 SQ. FT. SITE AREA/UNIT) |
| 5.4  | MAX. 4 UNITS/NET ACRE (10,890 SQ. FT. SITE AREA/UNIT) |
| 5.45 | MAX. 2 UNITS/NET ACRE (21,700 SQ. FT. SITE AREA/UNIT) |
| 5.5  | MAX. 1 UNIT/NET ACRE (43,560 SQ. FT. SITE AREA/UNIT)  |
| 5.6  | MIN. 2.5 GROSS ACRES/UNIT                             |
| 5.7  | MIN. 5 GROSS ACRES/UNIT                               |
| 5.75 | MIN. 10 GROSS ACRES/UNIT                              |
| 5.8  | MIN. 20 GROSS ACRES/UNIT                              |

### AMENDMENTS:

RESOL. 92-343, 6-8-92  
91-205, 3-18-91





## SDICTIONAL LAND

STATE OR FEDERAL LAND

## CONSTRAINTS OVERLAY

## SEISMIC HAZARD

STEEP SLOPE

FLOOD HAZARD

## SOIL EROSION

MILITARY FLIGHT OPERATIONS (65db)

MILITARY FLIGHT OPERATIONS (60db)

## CILITIES

PUBLIC OR PRIVATE RECREATION AREAS

## EDUCATIONAL FACILITIES

### OTHER FACILITIES

## SOLID WASTE FACILITIES

#### 4. SPECIAL TREATMENT AREAS

4.2	RURAL COMMUNITY
4.4	COMPREHENSIVE PLANNING AREA

## 5. RESIDENTIAL

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5.5	MAX. 1 UNIT/NET ACRE (43,560 SQ. FT. SITE AREA/UNIT)
5.6	MIN. 2.5 GROSS ACRES/UNIT
5.7	MIN. 5 GROSS ACRES/UNIT
5.75	MIN. 10 GROSS ACRES/UNIT
5.8	MIN. 20 GROSS ACRES/UNIT

## 6. COMMERCIAL

6.1	MAJOR COMMERCIAL
6.2	GENERAL COMMERCIAL
6.3	HIGHWAY COMMERCIAL

## 7. INDUSTRIAL

7.1	LIGHT INDUSTRIAL
7.2	SERVICE INDUSTRIAL
7.3	HEAVY INDUSTRIAL

## 8. RESOURCE

8.1	INTENSIVE AGRICULTURE (MIN. 20-ACRE PARCEL SIZE)
8.2	RESOURCE RESERVE (MIN. 20-ACRE PARCEL SIZE)
8.3	EXTENSIVE AGRICULTURE (MIN. 20-ACRE PARCEL SIZE)
8.4	MINERAL AND PETROLEUM (MIN. 5-ACRE PARCEL SIZE)
8.5	RESOURCE MANAGEMENT (MIN. 20-ACRE PARCEL SIZE)

CERTIFICATE OF ADOPTION

BY THE

DIRECTOR OF PLANNING AND DEVELOPMENT SERVICES

By Resolution No. 92-148, the Kern County Board of Supervisors adopted this Specific Plan in this form on the 16th day of March, 1992, officially entitled the Willow Springs Specific Plan, after conducting a public hearing duly advertised, pursuant to all ordinance requirements of the County of Kern and its adopted General Plan.

Certified this 7TH day of APRIL, 1992.

Glenn A. Bursill  
Director



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C

ROSAMOND S.P. #5-A-3

#5-A-3

1 mile

0 1/8 1/4

1" = 1,000'

165 Library

109 Moss - 2370



U.C. BERKELEY LIBRARIES



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